

STH
The



CHEMIST AND DRUGGIST

or RETAILER — WHOLESALE — MANUFACTURER

FEBRUARY 4, 1950



INCREASED
PUBLIC
ADVERTISING

will bring
**INCREASED
SALES**
OF

Acriflex
THE MODERN ANTISEPTIC CREAM

• A Bonus of 13
to the dozen
is available for
parcels of 3 dozen
in return for
display services

MANUFACTURED IN ENGLAND BY

ALLEN & HANBURY LTD LONDON E2

"... the ports of slumber open wide
To many a watchful night!"
II Henry IV, iv, 4.



IN INSOMNIA

'Carbrital'

In 'Carbrital' Capsules the rapid, but relatively brief, hypnotic action of soluble pentobarbitone is combined with the prolonged sedative effect of carbromal. In insomnia 'Carbrital' produces slumber simulating natural undisturbed sleep of adequate depth and duration, and patients awaken refreshed and alert.

'Carbrital' is also indicated as a general sedative in neurasthenia, etc., for pre-operative sedation, and routinely in minor operations.

Each 'Carbrital' Capsule contains $1\frac{1}{2}$ grains of soluble pentobarbitone and 4 grains of carbromal.

Supplied in Tax-free Dispensing Packs

Bottles of 10 Capsules : 3/6, 25 Capsules : 6/6, 250 Capsules : 52/6



PARKE, DAVIS & COMPANY
HOUNSLOW, MIDDLESEX
Tel. : Hounslow 2361 (11 lines) Inc. U.S.A., Liability Ltd.

MANESTY

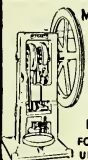
TABLET MAKING MACHINERY



**MANESTY
F3
TABLET
MACHINE**

OUTPUT
85
PER MIN.

TABLETS UP TO $\frac{3}{4}$ " DIAM.



**MANESTY
HAND
TABLET
MACHINE**

OUTPUT
100
PER MIN.

FOR TABLETS
UP TO $\frac{1}{2}$ " DIAM.



**MANESTY
E2
TABLET
MACHINE**

OUTPUT
85
PER MIN.

FOR TABLETS UP TO $\frac{1}{2}$ " DIAM.

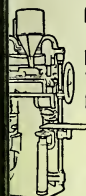


**MANESTY
HAND
COMPACT
PRESS**

OUTPUT
2000
COMPACTS
PER DAY

**MANESTY
CP2
COATING
PAN**

STANDARD
SIZE
30" DIAM.



**MANESTY
B.B.3
ROTARY
TABLET
MACHINE**

OUTPUT
1000-1500
PER MIN.

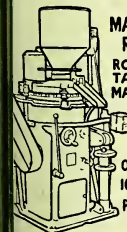
TABLETS UP TO $\frac{1}{2}$ " DIAM.



**MANESTY
No. 2A
TABLET
MACHINE**

OUTPUT
55-220
PER MIN.

TABLETS UP TO $\frac{1}{2}$ " DIAM.



**MANESTY
R.S.1
ROTARY
TABLET
MACHINE**

OUTPUT
168-336
PER MIN.

TABLETS UP TO $\frac{3}{8}$ " DIAM.

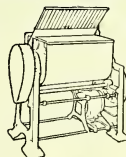


**MANESTY
ROTOGRAN
OSCILLATING
GRANULATOR**

OUTPUT
150-224
LBS.
PER HOUR.

**MANESTY
MIXER**

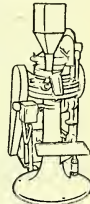
CAPACITY
100 LBS.
OF POWDER



**MANESTY
B3
ROTARY
TABLET
MACHINE**

OUTPUT
400-500
PER MIN.

FOR TABLETS UP TO $\frac{1}{2}$ " DIAM.



**MANESTY
D3
ROTARY
TABLET
MACHINE**

OUTPUT
300-350
PER MIN.

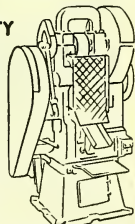
FOR TABLETS UP TO 1" DIAM.



**MANESTY
No. 3
TABLET
MACHINE**

OUTPUT
30-400
PER MIN.

FOR TABLETS UP TO $2\frac{1}{4}$ " DIAM.



MAY 8-19
EARLS COURT
& OLYMPIA

SEE OUR EXHIBIT

**BRITISH INDUSTRIES
FAIR 1950**

**OLYMPIA
Stand D.12.**

*Further new models
will be on show*

MANESTY MACHINES LIMITED

SPEKE, LIVERPOOL, 19.

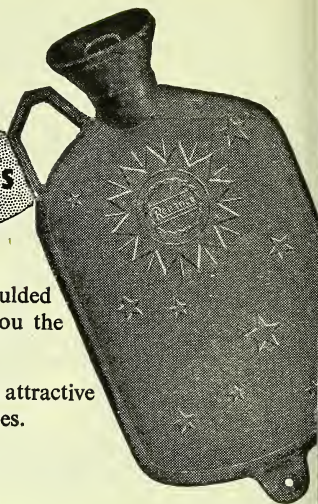
TELEPHONE: HUNTS CROSS 1972

TELEGRAMS: MANESTY, LIVERPOOL

ORDER NOW FOR THE WINTER SEASON

Reliance

MOULDED SEAMLESS HOT WATER BOTTLES
THE ORIGINAL BRITISH



As the originators and largest Manufacturers of Moulded Seamless Hot Water Bottles — we are able to offer you the finest range of Bottles in the trade.

We are now producing new and beautiful designs in attractive pastel colours which we have proved will stimulate sales.

Immediate delivery.

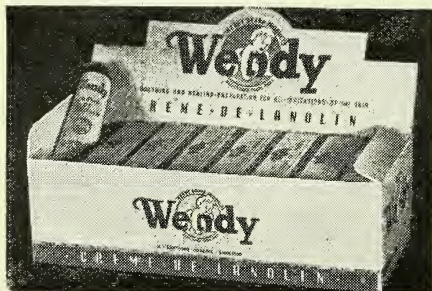
Phone or write for samples and prices

RELiance RUBBER CO. LTD - LOTS ROAD - LONDON - S.W.10

Telephone: Flaxman 6200 and 098516

ESTABLISHED 1889

Telegrams: 'Doorstop' Fulroad, London.



Wendy Brand CREME de LANOLIN

Created to meet the demand for a smooth, easily applied Creamed Lanolin. Is available in handy Cartoned Tubes and attractive 2-dozen display outers.

The tube has now been increased in size, the retail price remaining the same.

Retail Selling Price
1/4½ inc. tax.

Obtainable from your wholesaler.

If any difficulty write direct to the Manufacturers:

COLLEGE LABORATORIES LTD.

The Tower, Warmley, Bristol

London and Home Counties Distributors

H. B. DORLING LTD.

18 Churston Avenue, Upton Manor, London, E.13

Telephone: Grangewood 2324



means

EAU de COLOGNE

(Blue and Gold Label)

in any language
the world over



The Hall-Mark of Fine Eau de Colognes
and Aids to Beauty

Made in England

R. J. REUTER
COMPANY LIMITED, SLOUGH, BUCKINGHAMSHIRE

Telephone: Slough 20341-2

P.

se tax if required for the following conditions: — *Hallux valgus*, moderate severity; severe bunion; *hallux rigidus*; severe toe displacement or deformity—severe hammer toe; *pes cavus*; results of chronic bone disease; gout associated with it; spastic paraplegia; severe degree of flat foot; condition following severe fracture of foot; metatarsalgia; condition following arthrodosis operations. Boots of the following descriptions would be regarded as surgical footwear:—Calcaneal spur; pes; outside iron and toe strap; drop foot; for short limb. **Surgical Belts.**—The list of belts that are free of tax when applied to the specific order of a medical practitioner is extended to include those designed solely for use in severe anachnopsosis; pathological obesity following umbilical hernia operation; or after operations on the spinal column, e.g., clear pulposus (intervertebral disc), symplectomies, spinal tumour; or belts with straps for prolapse of the womb (prolapsus uteri) or rectum (prolapsus ani).

B.M.A. on Medicine Advertisements.—The control of those proprietary medicine advertisements that mislead patients and prevent the early treatment of disease is recommended in a report recently published by a Proprietary Medicines Committee set up by the British Medical Association in October 1948. The report also states that the committee responsible for maintaining the British Code of Standards for committees representing newspaper and advertising organisations and the Proprietary Association should satisfy itself that there are reasonable grounds for believing that a product advertised is capable of doing what is claimed for it when used in the manner and dosage recommended. The B.M.A. Committee suggests that not all advertisers comply with the whole of the Code. Statements that "all doctors" or "most doctors" recommend a product should not be permitted, and only authorities or persons of the highest scientific standing and integrity should be consulted for references. Compilation of a list of disorders is not regarded as a solution to problems of advertising proprietary medicines, each disorder mentioned in an advertisement should be scrutinised and the following questions asked: "Will delay in getting medical advice be dangerous to health or life?" and "Is the symptom one which can be safely diagnosed without special training?" The Committee is not in favour of a "white list."

LOCAL NEWS

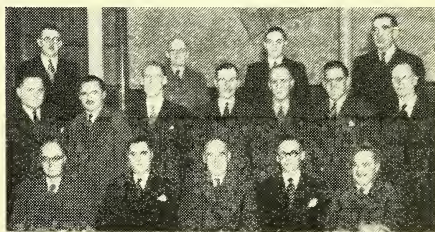
Halifax Whist Drive.—A whist drive organised by the Halifax Branch of the Pharmaceutical Society on January 26 resulted in the sum of £25 being raised for the Society's Benevolent Fund. The whist prizes were distributed by Mrs. Swire (wife of the chairman, Mr. F. H. Swire).

Association Officers Elected.—At the annual meeting of the London Pharmacists' Branch of the Association of Scientific Workers, on January 19, the following were elected:—*Chairman*, Mr. George Baxter; *Secretary*, Miss M. M. Rogers, Joyce Green Hospital, Dartford, Kent; *Treasurer*, Mr. Norman J. van Abbe.

"Unfair" Tax on Dispensing Labels.—Plymouth Health Executive Council resolved on January 26 to support the local Pharmaceutical Committee in efforts to free dispensing labels from purchase tax. Mr. T. B. Harvey, M.P.S., described the tax as unfair and also complained of the irregular incidence of purchase tax on preparations dispensed by chemists.

Broadcast from Chemical Works.—The British Broadcasting Corporation programme, "Workers' Playtime," was broadcast from the Stratford factory of A. Boake, Roberts & Co., Ltd., on January 17. At the end of the show Mr. F. G. Pentecost (managing director) thanked the artists and the B.B.C. for an enjoyable half-an-hour.

Society's Librarian at Canterbury.—Members of the East Kent branch of the Pharmaceutical Society met on January 18 at Canterbury under the chairmanship of Mr. E. P. Bush to hear a lecture by Miss Lothian (librarian of the Society) on London and pharmacy in the seventeenth cen-



REPRESENTATIVES' CONFERENCE.—Group photographed at the annual representatives' conference of A. L. Simpkin & Co., Ltd., Sheffield, includes Messrs. C. E. Hatfield (works manager), E. J. Long, A.S.A.A. (general manager), A. L. Simpkin, M.C. (managing director), A. N. Simpkin and C. Simpkin (directors).

tury, describing the life and work of the apothecaries of those days. Members were interested in the rare and ancient documents from the Society's library which were exhibited.

P.A.S. on Prescription. — Edinburgh Executive Council decided on January 26 to ask its Medical Committee whether the Committee desired to take any action on the prescribing on N.H.S. prescriptions of *p*-aminosalicylic acid. Between April 5 and December 13, 1949, 221 prescriptions for Paramisal sodium were issued by sixteen doctors in the area at a total cost of £422. The chairman of the Council (a medical practitioner) said it was not likely, at present, that "g.p.'s" would know which cases would react favourably and which would not, though it was recognised that there were not enough beds in hospitals for tubercular patients, and that many were therefore being treated at home.

Bradford Branch Resolutions. — Bradford Branch of the Pharmaceutical Society is forwarding the following resolutions for consideration at the Branch Representatives' meeting:—

The Pharmaceutical Society should submit a concrete plan of action to the Ministry of Health to ensure that pharmacists are appointed to main posts of responsibility in the medical supply service. Pharmacists are trained to act as medical supply officers to the nation, but this function is being taken over by clerical administrative officials.

The Pharmaceutical Society should be represented on any Committee set up to negotiate new scales of salaries for pharmacists. A co-ordinated policy is essential so that pharmacists in retail, manufacturing and hospitals can work as a united body towards the considerable improvement of remuneration.

This Branch, deploring the Minister of Health's recent regulation re advertising of dispensing under the National Health Service, supports the Council of the Society and the National Pharmaceutical Union in their objections to the Ministry and urges them to pursue with the utmost vigour representations against such Ministerial regulations which are antagonistic to the profession's Code of Ethics.

Changes should be made regarding the election of members of Council:—

(a) By allowing members to be more conversant with views and policies of candidates for election.

(b) By rearranging representation so that each Member of Council is answerable to the area for which he or she is nominated.

That discussion in Council and decisions on resolutions passed at this Conference be reported to the next Conference and also to the branch or branches promoting the resolution.

The Council should watch very closely the effect of the new Higher School certificate requirements for students on the intake of recruits during this year, and report on this with a view to making adjustment to maintain intake of students at or above the 500 per annum level.

The "Pharmaceutical Journal" is most uninspiring and uninviting in its presentation and the Council should give serious consideration to its speedy improvement.

IRISH NEWS

Dance Subscriptions.—The Benevolent Fund dance committee, Dublin, is shortly closing its subscription list in connection with the 1949 dance, and reminds those who have not yet sent along their usual subscription to forward it as early as possible to Mr. David Murphy, M.P.S.I., 67 Lower Mount Street, Dublin.

Examination Results. — The following candidates were successful in the January Assistants' examination of the Pharmaceutical Society of Ireland: Mary Buckley, Thomas J. Carroll, Nora Coughlan, Bernard Cullen, Mary P. Dooly, Mary Duffy, Mary I. Duggan, Teresa Hayes, Kathleen Leamy, Margaret M. May, Patrick J. Mulvaney, Kathleen L. Murphy, Catherine Neville, Henry J. O'Meara, James O'Sullivan, Maureen S. Reid, Una Swanton, John A. Tierney, Margaret M. Tierney, Columban Treacy, Nora Twomey.

Increase in Membership.—The calendar of the Pharmaceutical Society of Ireland for 1950 shows that the number of pharmaceutical chemists on the register of the Society on October 1, 1949, was 1,837 (an increase of forty-two), and membership of the Society rose to the record figure of 962. The number of qualified assistants registered is 1,397, which includes 798 who later qualified as pharmaceutical chemists leaving 599 qualified assistants. Of the Licentiates on the register, 102 have qualified as medical practitioners. Further statistics are as follows:—Registered drugists, 405 (seventy-three since qualified chemists and 116 as pharmaceutical chemists in Northern Ireland); associate drugists, forty-one; preliminary registration ninety-five. The rotation list of the Council shows that the members due to go on of office in October of this year are Messrs. J. J. Roche, Peter Fullam, P. McGrath, Gerald O'Neill, N. A. McKan, Maurice Power and C. D. O'Shea. Members of the Society who have not received their copies of the calendar should communicate with the Registrar.

LEGAL REPORTS

Under the Influence of Antihistamines.

At Birmingham stipendiary magistrates' court, recently, Russell Anderson was fined £10, with £3 3s. costs, and disqualified for twelve months from driving a car, after the defending solicitor had submitted that there were special reasons why he should not be automatically disqualified. As to the special reasons," Anderson, in evidence, said he began sneezing and took three cold-cure tablets, and Dr. W. T. Cooke, a consulting specialist at the Queen Elizabeth Hospital, Birmingham, said that the drug was one of the antihistamine group. Between 20 and 30 per cent. of the people taking those drugs suffered from side-effects, and a doctor examining a man suffering from those effects might be unable to tell whether he was under the influence of drink or of the drug. Defending solicitor said: "It appears clear that something ought to be done to prevent the possibility of people taking these drugs and thus being incapable of driving."

Posed as Doctor.—At Marylebone, London, magistrates' court, recently, an Irishman with "frustrated medical ambitions," Jeremy Patrick Burke (thirty-eight), of Hughburke Kilmaley, co. Clare, Eire, who had posed as a doctor, acted as locum tenens, and served on ships, causing the local Dr. Jeremiah Burke considerable annoyance and trouble, was remanded until February 8 for a medical and mental report. There were five charges. They were that on December 15, 1949 he was in the authorised possession at Wigmore Street, London, W.1, of gr. 1½ morphine, that on the same date he falsely pretended to be Dr. Jeremiah Burke, M.B., B.Ch., that on December 3, 1949, he obtained by false pretences from John Bell & Croyden, Wigmore Street, twelve ampoules of Brevintra, 100 Adreno-Spermin tablets and twelve N63 tablets, worth about £3; that similarly obtained from the same shop on December 15 six ampoules of Hormonal and Glynol, worth 6s. 3d., and that on December 8 and 15, at 72 Queensboro' Terrace, Bayswater, he obtained, by fraud, credit to the amount of £4 4s. from Viola Hattison Appleton. A detective-inspector said that on December 15, 1949, the accused went to John Bell & Croyden, and asked for some medicines, including a solution of atropine and morphine. He subscribed himself as Jeremiah Burke, M.B., B.Ch. There was a doctor of that name

who was registrar of St. James Hospital, Balham. A prescription handed in by the accused was made out to Mrs. McCoran, 72 Queensboro' Terrace, but there was no person of that name at that address. Accused gave as his address the registered address of Dr. Burke. On December 3 he had been to the shop, represented himself to be Dr. Burke, and been allowed certain medicines on credit. He had also acted as locum tenens in certain parts of the country and been on ships. According to himself he "did quite well." He had intended to become a doctor and had taken the entrance examination but his father had died and he could not continue his studies. The sergeant said he had arrested the accused on a warrant at Ennis, Ireland. He had seen members of the accused's family and the parish priest and from inquiries it seemed that the accused was not so much a rogue as "slightly mental." In his statement the accused said he had no ulterior motive in obtaining the drugs; he was not a drug addict and did not traffic in Dangerous Drugs. He was willing to pay the debts incurred, was sorry for the inconvenience he had caused, and wished to apologise to Dr. Burke. Asked by the magistrate if Burke had prescribed drugs for people, the officer said the police had no evidence that he had given anybody treatment since had been out of prison.

BUSINESS CHANGES

THE offices of the Royal Commercial Travellers' Schools have been transferred to Kings Court, 48 Broadway, London, S.W.1.

MR. TERENCE M. LINCOLN, M.P.S., who acquired the business at 76 St. Giles' Street, Norwich, of the late Mr. A. E. Beeston, is now trading under his own name.

REED BROTHERS (ENGINEERING), LTD., Albion Works, Alberta Street, London, S.E.17, have appointed Mr. T. F. McHardy manager of their chemical plant section.

ORTHO PHARMACEUTICAL, LTD., High Wycombe, Bucks, have appointed Mr. G. C. Shevel manager of their Ireland division. Mr. Shevel's address is St. Paul's, Shankill, co. Dublin.

EVANS MEDICAL SUPPLIES, LTD., have appointed Mr. D. J. Wigley their representative to chemists in South-west London in place of Mr. D. Cummings, who is taking up an overseas appointment with the company.

TRADE NOTES

In the News.—An illustrated article on the manufacture of Litesome supporters at the works of Fred Hurtley, Ltd., Keighley, Yorks, appeared in the "Keighley News" recently.

Delay in Issue of List.—Barclay & Sons, Ltd., Barclay House, 95 Farringdon Street, London, E.C.4, state that owing to unforeseen printing delay, their 1950 sundries and drug price list (alphabetical) will not be available until March 1.

Again Available.—Colloidal Chemists, Ltd., Bessborough Place, London, S.W.1, announce that Dermina reducing cream, which was widely advertised prior to the 1939-45 war, is again available through wholesalers or direct.

Agencies in Eire.—F. H. Steele & Co., Ltd., Brookfield Laboratories, Blackrock, co. Dublin, are open to accept additional agencies in Eire for pharmaceutical products; they are equipped to manufacture, pack and distribute.

Finger Beauty Aid.—On another page in this issue is illustrated the Steddie manicure aid, which enables nail polish to be applied to the finger nails without smudging. Wholesale and export inquiries are invited by the manufacturers, Paragon, Ltd., 157 Regent Street, London, W.1.

New Range of Baby Foods.—Trufood, Ltd., Bebington, Ches, invite chemists to write to them for full details of the new Trufood strained and homogenised baby foods (beef and vegetable broth; mixed vegetables; carrots; peas; apples with rose hip syrup; and prunes with semolina).

Bonus Terms.—The "best terms" on which an extra discount of 12½ per cent. is allowed on Silvikrin products by Prichard and Constance (Manufacturing), Ltd., North Circular Road, West Twyford, London, N.W.10, provide for a minimum order of 70s. and not as previously stated.

Change of Distribution.—Roussel Laboratories, Ltd., 4 Golden Square, London, W.1, announce that, by mutual arrangement, they are taking over the distribution of the medical products of Antigen Laboratories, Ltd., on February 1. Orders and invoices should be sent to the Golden Square address.

Distribution from East London.—L. J. Warren & Co., Ltd., wholesale and export distributors, 119 High Street, White-

chapel, London, E.1, are opening a new section to act as main distributors for products in the proprietary, medicine and toilet field. They will distribute to both wholesalers and retailers and invite communications from manufacturers wishing to take advantage of the organisation.

Additions to Ranges.—THE BRITISH DRUG HOUSES, LTD., Graham Street, City Road, London, N.1, have added 50-mgm tablets of vitamin B₁, B.D.H., to their range; the tablets are issued in bottles of twenty-five, 100 and 500.—GLAXO LABORATORIES, LTD., Greenford, Middlesex, introduced on January 30 penicillin oral tablets each containing 200,000 units of crystalline penicillin-G sodium in bottles of ten.

Yeast Tablets for Animals.—Phillips Yeast Products, Ltd., Minerva Road, Park Royal, London, N.W.10, are manufacturers of Vetzyme veterinary yeast tablets for dogs and silver fox breeders and Kitzyme veterinary yeast tablets for cats and kittens. Vetzyme is issued in containers of 600, 2,000 and 5,000 tablets and Kitzyme in containers of fifty and 250 tablets. Both products are claimed to provide an abundance of all the B-vitamins.

Price Changes.—Glaxo Laboratories, Ltd., Greenford, Middlesex, announce that the prices of high-potency Ostelin tablets (bottles of twenty-five, 100 and 1,000) and Kapilon tablets (bottles of twenty-five, 100 and 1,000) were reduced on January 3. Pharmacists holding stocks should send details to the company not later than February 6, when an adjustment will be made for the difference in invoice price. The prices of high-potency Ostelin ampoules, Kapilon ampoules and Kapilon liquid are unchanged.

Turkish Pharmaceutical Almanac.—A feature of the Pharmaceutical Almanac of Turkey (447 pages + forty-eight pages advertisements) is that it contains a three two page summary in English of the Turkish contents. The Almanac outlines the historical and present aspects of the profession in Turkey, reviews the laws and regulations governing the practice of pharmacy in Turkey and gives the names and addresses of all Turkish pharmaceutical wholesalers and representatives of overseas manufacturers. Copies of the Almanac (price 30s. each) may be obtained on application to the publisher, Remzi Kocak,

Bark Merkez Ecza Deposu, Ada Han, Sirkeci, Istanbul, Turkey.

U.K. Rights Acquired.—Monsanto Chemicals, Ltd., 8 Waterloo Place, London, S.W.1, have purchased from the National Aluminate Corporation of America that company's patent rights in the United Kingdom for the manufacture of colloidal dispersions of silica sold in the United States under the trade name Nalcoag. Messrs. Monsanto have been manufacturing colloidal dispersions of silica for the past two years under the registered trade mark Syton, and will incorporate the results of experience of the two companies in the future development of these products, which they will continue to sell under the trade name Syton.

Press Advertising.—ALLEN & HANURYS, LTD., Bethnal Green, London, E.2, draw attention on the front cover to their increased public advertising of Acriflex antiseptic cream. — FASSETT & JOHNSON, LTD., 86 Clerkenwell Road, London, E.C.1, give details on another page of press advertising of Nuzora and a bonus offer for Anzora hair specialities. — RICHARD HUDNUT, LTD., Power Road, London, W.4, are extensively advertising in picture papers, women's magazines and periodicals their Three Flowers beauty aids, for which a new showcard in full colour (size 11 x 8 in.) has been made available.

Table of Prices.

A recent announcement by Gillette Industries, Ltd., Great West Road, Isleworth, Middlesex, gave prices of the company's razor blades in four varieties.

LEAMINGTON SPONGE DISPLAY WINS CHAMBER OF TRADE PRIZE.—Winning display by Hutton Barrett, Ltd., which was the winning entry in a competition organised by the Leamington Spa Chamber of Trade. The sponges were supplied by Messwell Bros, Longes.

Proprietary Articles Trade Association

Alterations to Protected List (Part 1).

—*John Bell, Hills & Lucas, Ltd.*, Cold capsules (J.B. brand), 10s. 6d. doz., tax 33½ per cent., i.r.p. 1s. 9d.

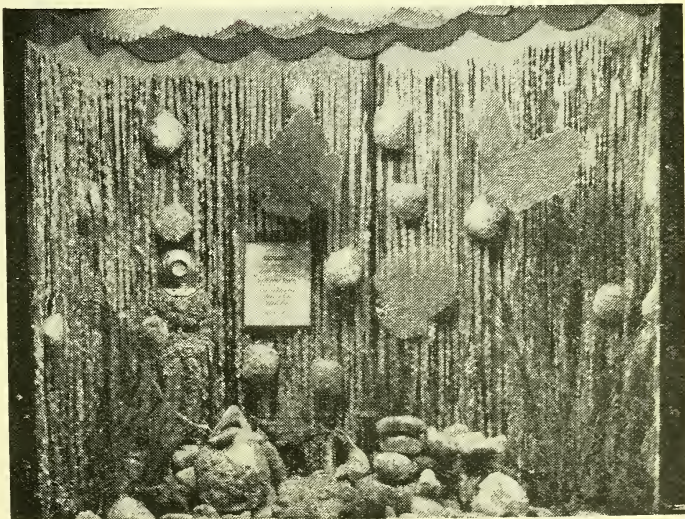
Roche Products, Ltd., Benerva tablets, 1-mgm., 100's, 32s. doz., 4s.; 3-mgm., 25's, 16s. doz., 2s.; 3-mgm., 100's, 48s. doz., 6s.; 10-mgm., 25's, 24s. doz., 3s.; 10-mgm., 100's, 80s. doz., 10s.; 25-mgm., 25's, 52s. doz., 6s. 6d.; 25-mgm., 100's, 180s. doz., 22s. 6d. (exempt from tax).

Corn Products, Ltd., Karo syrup, 1-lb., 15s. doz., 1s. 9d. (exempt).

Additions to Protected List (Part 1).

Howards & Sons, Ltd., Boracic acid, B.P., crystals and powder, 2 oz., 3s. 8d. doz., 5½d.; 4 oz., 6s. 4d. doz., 9½d.; 8 oz., 10s. 8d. doz., 1s. 4d. Purified borax, B.P., 2 oz., 3s. 4d. doz., 5d.; 4 oz., 5s. 4d. doz., 8d.; 8 oz., 9s. 4d. doz., 1s. 2d. Sodium bicarbonate, B.P., 4 oz., 4s. doz., 6d.; 8 oz., 6s. 8d. doz., 10d.; 16 oz., 11s. 8d. doz., 1s. 5½d. Epsom salts, B.P., and Glauber's salt, B.P., 4 oz. 3s. doz., 4½d.; 8 oz., 5s. doz., 7½d.; 16 oz., 7s. 8d. doz., 11½d. (all exempt).

Reckitt & Colman, Ltd., Disprin, 13s. 10d. doz., tax 33½ per cent., inclusive retail price 2s. 5 per cent. and 2½ per cent. for cash on orders value £2 Disprin only or, if 1 doz. or more Disprin added to 50s. order for mixed Dettol products, or to 70s. order for Dettol and other goods.



NEW COMPANIES

HILL WARD & Co., LTD. (P.C.).—Capital £2,000. To carry on the business of manufacturers of surgical equipment, belts, trusses, etc. Leslie H. Hill, Phyllis M. Hill, Horace S. Ward and Kathleen M. Ward, directors. R.O.: 16 Rivington Street, London, E.C.2.

B. G. OLIVER (OXFORD), LTD. (P.C.).—Capital £100. To carry on the business of manufacturing and dispensing chemists, etc. Bernard G. Oliver and Gwendoline V. Oliver, directors. R.O.: 463 Marston Road, Oxford.

CHEMICALS & ADHESIVES, LTD. (P.C.).—Capital £1,000. To carry on the business of chemists and druggists, manufacturers of glues and adhesives, etc. First directors are to be appointed. Douglas W. Henley, 144 Bromley Road, Beckenham, secretary.

ANCHOR GLASS Co., LTD. (P.C.).—Capital £10,000. To carry on the business of manufacturers of scientific, medical and surgical glassware, etc. Wm. R. Morton and Kay Morton, directors. R.O.: Brook

House, 191 Tottenham Court Road, London, W.1.

HOUSE OF WOODHALL, LTD. (P.C.).—Capital £1,000. To carry on the business of manufacturers of beauty preparation chemical, pharmaceutical and toilet goods etc. First directors are to be appointed. E. Perry, 76 New Cavendish Street, London, W.1, secretary.

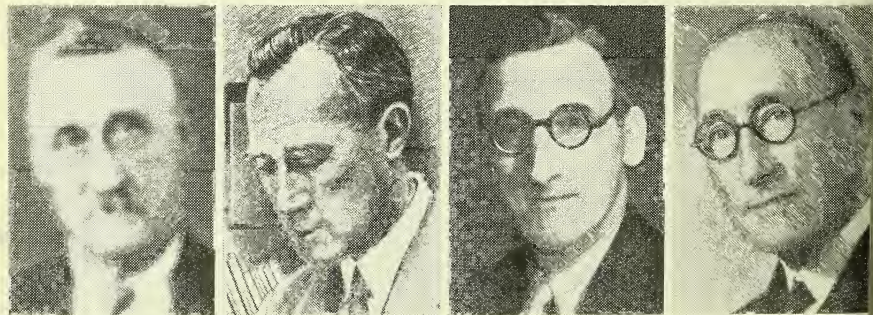
Company News

METAL BOX Co., LTD.—Sir Harry Jephcott has been appointed a director.

CAMWAL, LTD.—Net profit for the year ended September 30, 1949, amounted £24,014, against £34,062 in the previous year; taxation, £13,000 (£12,694); containers reserve, £2,000 (nil); stock depreciation reserve, £1,737 (£1,955); general reserve, £4,000 (£10,000); preferred dividend (5 per cent.), £1,360 (same). Dividend of 10 per cent. net (same) is recommended on the ordinary shares. £10,395 is carried forward compared with £9,015 brought in.

IS THIS AN EMPLOYMENT RECORD ?

Four brothers' two centuries of service with Stafford Allen & Son Ltd., Wharf Road, London



Left to right: Messrs. James, Frank, Fred and John Armstrong (Mr. F. Armstrong from an artist's drawing)

WITH the completion by Mr. John Armstrong recently of fifty years' service with Stafford Allen & Sons, Ltd., manufacturing chemists, London, N.1, no less than four Armstrong brothers have each contributed half a century with the company. They are:

James Armstrong, 1881-1934

Frank Armstrong, 1891-1945

Fred W. Armstrong, 1894-1949

John Armstrong, 1899—still serving.

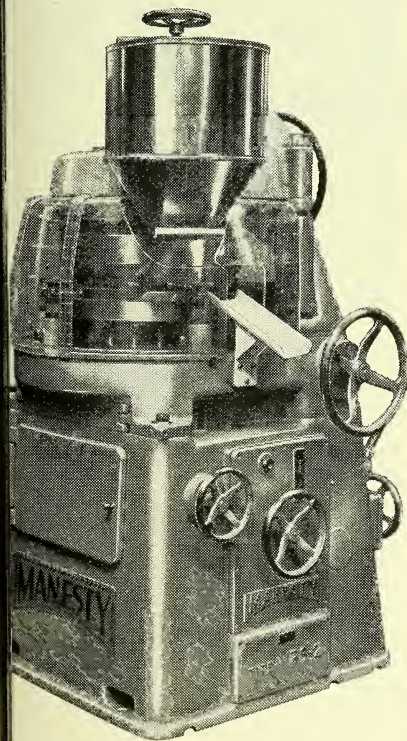
The total of service is thus 212 years.

On January 20 a dinner was held in Mr. J. Armstrong's honour at which forty senior and selected members of the staff were present. Speeches were made by Mr. Kenneth Allen, Miss Payne, Mr. Akers, Mr. Watts, Mr. Brammall and by Mr. Armstrong himself. Fourteen of those present besides Mr. Armstrong, had each been with the company for twenty-five years or more.

MACHINERY, PLANT AND EQUIPMENT

Welded Aluminium in Packaging.—A cold-pressure welding process developed by the research laboratories of the General Electric Co., Ltd., Magnet House, Kingsley, London, W.C.2, and used by the company for sealing aluminium containers which electronic tubes are sent overseas, may be found to have applications in packing in other industries. A flanged container is formed from an aluminium slug by impact extrusion. After the welding faces of the flange and the disc lid have been cleaned, they are welded in one quick operation giving an air-tight union.

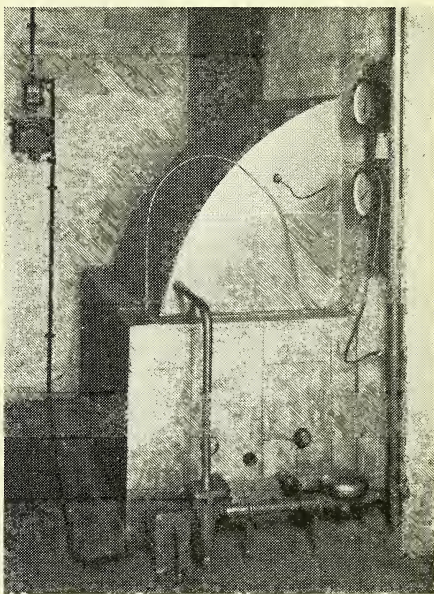
Rotary Tablet Machine.—Special features of the RS2 rotary tablet machine illustrated, which is manufactured by Manesty Machines, Ltd., Liverpool, 19, are



variable speed drive, worm drive in oil bath and output of 163 to 326 per minute. Equipped with twenty-one pairs of punches and twenty-one dies, it produces tablets up to $1\frac{3}{8}$ in. in diameter. Adjustments for

speed, depth of fill, and pressure are all at the front of the machine. Punches and dies are interchangeable. The machine occupies a floor space of approximately 4 ft. x 4 ft. 6 in. and 6 ft. 4 in. high.

Insulating Bricks for Furnaces, etc.—Chemical manufacturers and owners of all plants using gas-, steam- or electrically-heated tanks can effect substantial economies in fuel consumption by means of



A gas-heated tank encased with Reymor bricks.

the Reymor insulating bricks manufactured by the Reymor Brick Co., Ltd., 48 Church Lane, Wolverhampton. These are a patented interlocking, pre-cast brick, soft enough to be cut or sawn, and capable of being quickly assembled round any heated metal tank by unskilled labourers, in the shortest space of time, without the use of mortar or any other jointing material. They can just as easily be taken apart. Each brick is rectangular and of standard thickness, formed with a tongue on one edge and a groove in the opposite edge. Special bricks (long-angle and short-angle) are provided for corners, having a groove in their outer edge and the other a tongue, to key with the tongues and grooves of the bricks in the walls.

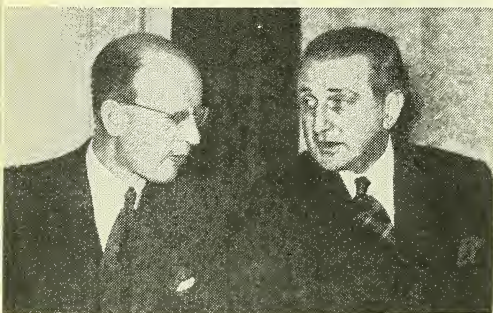
C.F. MANUFACTURERS' LUNCHEON

THE fourteenth annual luncheon to the Manufacturers' Section of the Chemists Federation was held in London on January 26. Mr. P. H. Smith (president) was in the chair, and was supported by Mr. E. A. Brocklehurst (vice-president), Mr. L. Boon (treasurer), Messrs. R. Campbell Feather, W. J. Tristram, J. D. Bohn, E. C. Cripps and F. J. Smith (vice-presidents), Mr. E. W. Godding (chairman, C.F. Standards), Mr. N. Dewey (chairman, C.F. Propaganda), and Messrs. G. A. Mallinson, A. Chapman, K. G. Patteson, W. H. Knott, S. M. Lennox, W. A. Kinnear, G. E. Mann, C. H. Jones and L. D. Smith (members of Council), with Mr. R. H. Kemp (secretary, C.F.). Among the many guests were Dr. O. C. Carter (chairman, British Medical Association, Proprietary Medicines Committee), Dr. S. W. Jeger, M.P., Mr. H. C. Shaw (president, Pharmaceutical Society), with the secretaries (Messrs. F. W. Adams and Hugh N. Linstead), Mr. J. Hearle (chairman, N.P.U.), Mr. R. L. Taylor (president, Association of British Pharmaceutical Industry), with

Mr. E. A. Brocklehurst, proposing the toast of "Our Guests," said they were honoured with the company of a thoroughly representative gathering of leaders of all sections of pharmacy, medicine and the drug trade, which reflected the increasing interest in the activities of the Chemists Federation. They were delighted to have with them Dr. O. C. Carter (chairman of the B.M.A. Committee on the



Messrs. P. H. Smith and R. H. Kemp (president and secretary respectively of the Chemists Federation)



Mr. E. A. Brocklehurst (vice-president) and Dr. O. C. Carter (chairman, Proprietary Medicines Committee, British Medical Association).

the secretary (Mr. C. W. Robinson), Mr. J. Caldwell (president, Ulster Chemists' Association), Miss A. E. Strachan (secretary, Northern Ireland C.F. Committee), Mr. W. Sperce Culbert (president, Scottish Pharmaceutical Federation), with Mr. W. T. Elder (chairman), and Mr. E. C. Pearce (president, Proprietary Articles Trade Association), with the secretary (Mr. H. E. Chapman). Representatives of the National Pharmaceutical Union Executive present included Messrs. J. F. McNeal, H. B. Coulson and D. W. Hudson.

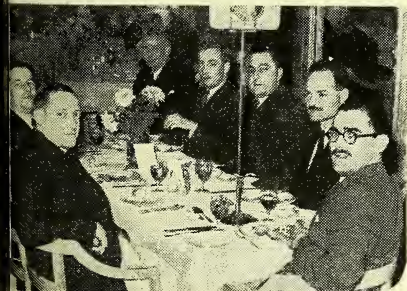
man of the B.M.A. Committee on the advertising and sale of proprietary medicines). They were also glad of the opportunity of welcoming the president of the A.B.P.I., for pharmacists were indebted to the manufacturers for the way in which they had maintained supplies under N.H.S. Finally, they extended a warm welcome to pharmaceutical representatives from Scotland and Northern Ireland. DR. O. C. CARTER, responding, said his first duty was to express, on behalf of all the guests, their keen appreciation of the warm welcome extended to them. Pharmacists, said Dr. Carter, had been performing a great service to the public in the efficient manner in which they were dispensing medicine under N.H.S., and in so doing they were improving the standard of their calling. He now realised that when the investigations were carried out by the B.M.A. committee on the advertising and sales of proprietary preparations, a mistake had been made in not inviting the C.F. to place views on the subject before the committee, and he, personally, would welcome their co-operation in this way on future occasions. Dr. Carter said he had read their Code of Standards and he considered they had made an excellent

AT THE C.F. LUNCHEON

right: Messrs. Graham (N.P.U.), E. W. Godding (C.F. Standards Committee), F. W. Adams and Hugh N. Linstead (secretaries, Pharmaceutical Society of Great Britain).



In circle: Messrs. A. B. Pearce and H. E. Chapman (president and secretary, Proprietary Articles Trade Association). 2. Table 7. In background: Table 8. Table 3. Mr. S. M. Lennox (C.F. Council), presiding.



right: Messrs. R. L. (president and secretary, Association of British Pharmaceutical Industry), N. (chairman, C.F. Propaganda Committee) and Caldwell (president, Chemists' Association).



ginning. The B.M.A. and their organisation (C.F.) were both concerned with the same problem—the welfare of the community, and he would welcome continued co-operation with pharmacy. DR. S. W. JEGER, M.P., said he was interested as a Member of Parliament in the activities of the Chemists Federation. It would have been impossible, he contended, for the present or any other Government to plan for the National Health Service if there had been no manufacturing chemists and organisations such as theirs. He had read their Code of Standards and he thought they were admirable, a view with which he believed most legislators would agree. If there were more voluntary control, such as that operated by C.F., there would be less need for legislation to protect the community.

MR. P. H. SMITH (president), replying, thanked Dr. Carter and Dr. Jeger for the good opinions they had expressed on the objects and work of the Chemists Federation during the past thirteen years. It was certainly satisfactory to hear from a distinguished representative of the B.M.A. and from a medical practitioner who was

also a Member of Parliament that the Federation's endeavours to set up and implement ethical standards for proprietary preparations met with their commendation. The aim of the Federation, said Mr. Smith, was to ensure that products approved by C.F. could be confidently placed before the public. Such approval was only given after exhaustive expert and impartial investigation.

Referring to the Lloyd Jacob Committee report on price maintenance, the speaker said that, although they were not directly concerned with the subject, they were in full sympathy with the P.A.T.A., for they were well aware that chemists did not want a return of the bad old days of ruinous and uneconomical price cutting. They were more directly concerned with the activities of the Cohen Committee, and the Council of the Chemists Federation considered that the work carried out during the past thirteen years and particularly that performed in the operation of their Code of Standards during the post-war years, fully justified their view that C.F. should be invited to nominate representatives to that Committee.

MR. LINSTEAD ANSWERS QUESTIONS

At the Anglesey, North Carnarvon and Colwyn Bay Branch of the Pharmaceutical Society at Colwyn Bay on January 19, Mr. Hugh N. Linstead, O.B.E., Ph.C., M.P. (a secretary of the Society), spoke on some aspects of the "Relationship of the Pharmacist to the State." Replying to a question on how the Ministry of Health would set about the opening of health centres throughout the country, Mr. Linstead suggested that the county councils would be the responsible body and that the local pharmaceutical committees should be in a position to advise the county medical officer and executive council on the matter. Discussion took place on securing students for pharmacy, some members feeling that young people were discouraged by the standards required for entrance and were finding other professions easier. Mr. Linstead, when replying, pointed out that, though at present a greater proportion of people were finding their way into other professions, pharmacy was attracting some 100 more entrants annually than in 1939. As other professions filled up, more students might turn to pharmacy, particularly young women who were unable to find places in the medical schools. Much good could be done by branches contact-

ing local schools and arranging suitable talks to those about to leave school. Mr. Neal, Colwyn Bay, wondered whether the Ministry would try to save at the expense of the pharmacist the £10 millions sought from the proposed levy on prescription. Mr. Linstead thought it unlikely that the pharmacists' remuneration would be attacked, as that had been officially stated to be satisfactory. Certainly nothing could be done except through the negotiating machinery. MR. WOMPRA, Conway, stated that he was not satisfied with the present remuneration.

At Harrogate

Speaking at the Harrogate Branch on January 12, Mr. Linstead said that the Central Health Services Council had set up a committee to consider costly prescribing and this might restrict the present free prescribing by doctors. There was, as he knew, in the National Formulary a list of proprietary and non-proprietary medicines with a clear indication that the less expensive should be used. He did not think it necessary or healthy to regard the health centre pharmacy as direct competition to the pharmacist dispensing in private practice.

STATE MEDICAL RESEARCH, 1945-48

THE work of the Medical Research Council during the years 1945-48, a period of transition from war-time to peace-time research, is described in a report issued recently by H.M. Stationery Office. Among the many activities of the Council, the work of the biological standards department (see *C. & D.*, 1948.I.282) is of particular importance to pharmacy. During the period reviewed, new provisional standards were set up for streptomycin, *D*-thiobocarine chloride, and globin insulin (or the direct assay of globin insulin). Work was almost completed on standards for oxophenarsine, and the ABO blood groups. Replacement standards for tetanus antitoxin and digitalis were made, and methods of differential assay of individual penicillins in mixed samples (including a chromatographic method) investigated. Workers in the department did preparatory work towards establishing international standards for scarlet fever antitoxin and vitamin D₃, a provisional British standard for BAL, and draft Therapeutic Substances Act schedules for B.C.G. vaccine and BAL.

Developments in Chemotherapy

Despite lack of adequate accommodation at the National Institute for Medical Research, "especially for increasing work in chemotherapy," progress is recorded in work on malaria, amebiasis, filariasis (including investigation of the American drug Hetrazan), and on the photochemical composition of stilbamidine (a drug used in kala-azar). The antibacterial effects of derivatives of the drug V187 have been further investigated, and other workers have analysed the structure of the antibiotic amicidin S. Sir Charles Harington (director of the National Institute) and Dr. Piot have investigated the possibility that bacteriostatic agents may be found among substances in which a basically substituted aromatic or heterocyclic nucleus carries the amino propionic acid side-chain — a structure characteristic of natural aromatic and heterocyclic amino-acids and which might, therefore, facilitate entry of the drug into the cell. Study of the use of pheniformin, an antibiotic obtained from *Ustilago licheniformis*, shows that the compound is not likely, on account of its greater relative toxicity than streptomycin, to find therapeutic application in human tuberculosis. However, the discovery of a

highly active antitubercular compound differing greatly in structure from streptomycin "holds out hope for future developments." In the realm of pharmacology, work was done on the assay of pyrogens, and on histamine-liberating drugs. The curarising drug C₁₀ and an antagonising drug C₅ were elaborated.

The blood products research unit of the Council produced during the period 37,000 bottles of dried human plasma, 6,000 of fibrinogen, 9,000 of fibrin foam, 15,000 of thrombin, and 1,600 of gamma globulin for clinical trials in measles.

Virus Research

Work on epidemic diseases, including the common cold and influenza, has continued, and a means of titrating viruses adsorbed on cell membrane has been devised. The radiotherapeutic research unit, Hammersmith Hospital, London, has compared the value of x- and γ-rays in the treatment of cancer, and has used radioactive isotopes for studying the distribution of iodine in the thyroid glands of animals, and for other physiological experiments. The physiology and metabolism of bacteria and yeasts have been studied by the bacterial chemistry research unit, Lister Institute, London, and chemical microbiology research unit, Cambridge University.

Workers at the nutrition building, Mill Hill, London, established that the "improving" of flour with nitrogen trichloride (agene) affects the flour protein so that in dogs it may cause fits of hysteria, often fatal, and they have suggested that the use of agene for this purpose may be harmful to man (see p. 129). Sir Edward Mellanby, F.R.S. (secretary, M.R.C.), has continued his researches on the interfering effect of cereals on bone formation and calcium metabolism.

Other activities having a pharmaceutical bearing conducted during the period include investigations into the physics of the structure and behaviour of living tissues with electron-, ultra-violet- and phase-contrast-microscopy; biochemistry (e.g., the biogenesis of thyroxine); skin disorders; burns; blood transfusion; and toxicology (e.g., of beryllium and dinitro-*orthocresol*).

Copies of the report may be obtained from H.M. Stationery Office, York House, Kingsway, London, W.C.2, price 5s.



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National Association of Opticians

An Examination for the Fellowship Diploma of the National Association of Opticians will be held in Belfast on March 6th, and 7th. Applications by candidates to attend this Examination must reach the Secretary not later than February 11th, 1950.

An Examination will also be held at Edinburgh during the week commencing May 8th, the last date of entry being April 6th, 1950.

Application forms, Syllabus etc., may be obtained from the Director of Examinations, 8 Victoria Street, Liverpool, 2. Telephone: Central 5331-2

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Official organ of The Pharmaceutical Society of Ireland, The Pharmaceutical Society of Northern Ireland, The Chemists' and Druggists' Society of Ireland and of other Chemists' Societies in the Empire.

VOL. CLIII FEBRUARY 4, 1950

No. 3650

The British Chemical Industry— Past, Present and Future

THE "Report of the Chemical Industry" (pp. 76, 11 x 8½ in.) drawn up by the Association of British Chemical Manufacturers at the request of the President of the Board of Trade and published on February 1, is a document of the greatest national importance. It is a comprehensive survey of all branches of the industry, whose complexities—probably unparalleled in any other industry—it should help to make clear. The difficulties inherent in presenting a clear picture of the thousand-and-one individual operations that collectively constitute the industry as a whole have been admirably overcome.

The publication consists of a preface, seventeen chapters, nine tables of statistics of personnel, prices, distribution, output, rehabilitation, and expansion and forward plans, together with two graphs of cost indices and illustrating the organisation of the industry by products. After setting the historical background, the report includes, amongst others, chapters on changes and achievements in the industry; products and raw materials; research, development and technical surveys; process development and plant; patents and monopoly; location of factories; productive efficiency and productivity; distribution and selling organisation (home and export); trends and expansion, and the future of the industry.

The report is unique. It represents the first occasion on which a comprehensive

survey has been made of the British chemical industry—its history, origins, dispositions and activities today, and its development plans for tomorrow. It gives a clear picture of the industry—its relations with other industries, its long-term plans, and generally serves to show its vital place as a supplier at one and the same time of basic raw materials (for instance, soda ash) and highly finished medicinal products (such as penicillin).

In research activities the industry employs over 10,000 persons, some 3,000 of whom are professionally qualified scientists. The annual expenditure on these vital activities is approximately £8,500,000, and it is estimated that the cost will increase to no less than £11,400,000 when existing schemes for expansion of research and development are completed. Development plans now in hand total over 200, and they will involve an additional capital expenditure of £8,300,000, of which £1,560,000 has already been spent. Schemes of replacement and expansion will call for the expenditure of £191,000,000, to two-thirds of which the industry has already committed itself. When these forward plans are completed the production capacity of the industry will be increased by a further 70 per cent. By the end of next year it is estimated that output will be 50 per cent. greater than in 1946. In that year the products of the industry were valued at £212 millions, which rose to £250 millions in 1948, with the production capacity for that year estimated at £347 millions. The total capital employed in the industry at the end of 1949 was estimated at £231 millions, which probably represents £400 millions at current costs. Exports in the "Chemicals" group, as specified in the Trade and Navigation Accounts for 1938, totalled £22,280,000. In 1948 the aggregate of shipments was £86,670,000, representing an increase in volume of 56 per cent. over the 1938 exports. These are just a few facts and figures culled from the report.

The primary object of the report has been to determine whether, under its present direction and control, the plans for the future development of the British che-

nical industry are adequate to the part it has to play in the national economy. Those responsible consider that the data recorded and the proposals outlined make an affirmative answer possible, and this authoritative opinion is one with which, we are confident, all who study the report will find themselves in agreement.

Overdue for Recognition

THE Chemists Federation was founded in 1935 (its original title was Chemists' Friends Association), and for six years it made steady progress in developing its first objective—"the restriction to pharmacists of the retail sale of medicines." Following that period of consolidation, the Federation decided to set up "standards of quality for manufactured preparations as well as for claims made on their behalf." The drafting of rules and regulations to ensure the effectiveness of the "Standards" in protecting the public interest called for exhaustive investigations on the part of the pioneers of the movement, assisted by the highest technical and professional advice. This difficult and laborious task was brought to fruition in February 1947, with the publication of the "Chemists Federation Standards" (*C. & D.*, 1947.I.181). During the past three years these standards of "quality and claims" have been rigorously and impartially applied to some thousands of products of over 150 of the leading pharmaceutical chemical manufacturers. In that comparatively short space of time this movement of voluntary control within the industry has achieved a marked measure of support and success. The "Standards" will no doubt require revision from time to time in the light of changing conditions but they have proved to be a practical basis for ensuring and maintaining a rigid code of ethics in the production, publicity and distribution of this class of preparation.

C.F. is the only organised and representative body to have set up and succeeded in imposing comprehensive rules and regulations in relation to (a) the quality (b) methods of advertising and selling and (c) claims made on behalf of proprietary medicinal preparations distributed through

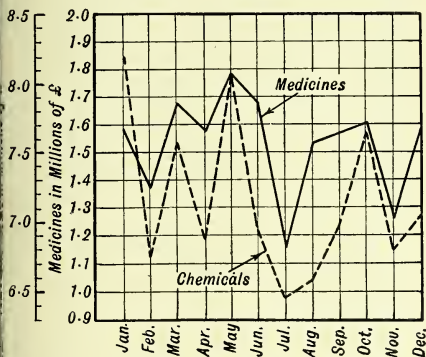
the retail chemist. As everyone is well aware, these are matters of current concern in both Government departments and medical circles. It is therefore strange that the work and experience of the Chemists Federation has remained almost entirely unrecognised in Whitehall and by the British Medical Association.

Speaking at the Federation's annual luncheon last week (p. 140), Dr. O. C. Carter (chairman, B.M.A. Proprietary Medicines Committee) frankly admitted that a mistake had been made in not inviting C.F. to place its views before his Committee and he added that he personally would welcome its co-operation on an future occasion. Dr. Carter said he had read the Federation's "Standards" and considered them to be excellent, and concluded by saying "More power to your elbow." We have listened on numerous occasions to similar favourable comments from other speakers, including representatives of Government departments, and equally well qualified to express opinion on the subject, but laudatory lip-service is not enough, in fact it aggravates the ironical position in which for the moment C.F. finds itself.

In our opinion C.F. should be given full representation on the Cohen Committee, which is at present engaged in considering another closely allied aspect of the trade in proprietary medicines. Surely if years of experience would be helpful to the Committee and the presence of C.F. representatives would make the Committee a little less unbalanced than it is at present, and its findings and recommendations more likely to be equitable and in the best interest of the public. It seems to us that the Chemists Federation and the policy it stands for have now reached a critical stage in their history. Its activities to date and the organisation it has built up well justify a claim that the Federation should be accepted in official, medical and all other quarters as ripe for recognition and as an expert and constructive body well able to speak with authority on the specialised subject whenever and wherever the public interest in relation to proprietary medicines is being considered or investigated.

A Year's Trade

EXAMINATION of Britain's trade accounts for 1949 (p. 160) shows that total imports were £194.4 millions (9.4 per cent.) more than in 1948. The rise was accounted for by higher costs of raw materials, foodstuffs, tobacco, etc., and manufactured goods (in that order). The value of imports of manufactured chemicals, etc., however, declined by £5.4 millions, reflecting a fall in the quality of goods brought in. In iodine and menthol the higher



values of last year's imports when compared with 1948 are mainly due to devaluation. As was expected, fewer foreign proprietary medicines were brought in than in 1948. The increased value of imported essential oils reflects the larger quantities obtained from India, Ceylon, Holland, Italy, Palestine and other countries; the smaller amount of French oils brought in is more than in the previous year.

Exports in 1949 as a whole were £202.6 millions (12.8 per cent.) more than in 1948, while total exports of manufactures rose to £181.9 millions, including an increase in chemicals, etc., of £2.5 millions. Shipments of chemicals to Canada rose by about £161,000 on 1948, although exports to the United States were down by £87,000 on the year. Many of the principal markets (India was an exception) took greatly reduced quantities of insecticides, etc., compared with the considerable quantities that were sent out in the previous year. No exports of glycerin are recorded for 1949. Drugs and medicines increased by £2.625 millions on the year,

although, as was expected, exports of proprietaries declined. The quantities of quinine, aspirin, insulin and penicillin, ointments and liniments sent abroad were much greater last year than in 1948.

The toilet preparations industry is to be congratulated on its achievement in the export drive. With many markets curtailing exports of "non-essentials," exports, nevertheless, rose in value by £1.095 millions, compared with the 1948 figure. All sections of the industry shipped increased quantities, including soap millers (values of exports of toilet soap are recorded separately). The lower value of toilet requisites (other than toilet brushes) is probably due to restrictions on imports of luxury goods imposed abroad.

Chilblains and Calcium

FOR many years treatment of chilblains has included calcium and vitamin D, orally or by injection, and these compounds have also been taken by sufferers as a prophylactic. It comes as something of a surprise, therefore, to learn from Dr. J. T. Ingram, F.R.C.P. (physician-in-charge, skin department, Leeds General Infirmary) ("British Medical Journal," December 3, 1940, p. 1284) that there is "no scientific evidence" to support the claims for the efficacy of calcium, though it may have a psychological and perhaps "some biological" effect. As for calciferol, massive doses have worked wonders in the treatment of some cases but as a prophylactic the compound has nothing to commend itself to the medical practitioner, owing to the risk of metabolic shock. Other drugs used for chilblains have included small doses of thyroid—more effective in thin patients—and nicotinic acid (50 mgm. t.d.s.), while a purgative has often cut short an attack—probably, Dr. Ingram thinks, by disturbing the fluid balance in the tissues. A doctor correspondent in the same journal cited several instances (including treatment of himself) in which calcium with vitamin D had been found beneficial. He thought, however, that the therapeutic value came from the vitamin D. His letter supports the view that a controlled investigation of a large number of cases is called for.

REPORT ON THE BRITISH CHEMICAL INDUSTRY

THE following abstracts are taken from a Report on the British Chemical Industry, 1949, drawn up and published by the Association of British Chemical Manufacturers at the request of the President of the Board of Trade.

Historical Background

IN 1914, the British chemical industry was, by subsequent standards, a loose agglomeration of separate industries. The heavy chemical side was far better developed than the manufacture of synthetic organic chemicals, which indeed hardly existed. This country was largely dependent on Germany for supplies of many essential products, particularly dyestuffs, drugs and other fine chemicals. Thus, whereas Germany produced 83 per cent. of the world's dyestuffs in 1914, Great Britain produced only 3 per cent. and these mainly of the simpler types. In addition, in the production of heavy chemicals Germany had been enormously strengthened by the recent development of the Haber-Bosch process for the synthesis of ammonia from atmospheric nitrogen and thus became equipped for the manufacture of nitric acid, explosives and nitrogenous fertilisers independently of Chile nitrate, until then the world's principal source of combined nitrogen. The outbreak of World War I, therefore, found Britain in a serious position from the chemical point of view. Many products essential for the war-time economy were lacking, as were also the technical information and equipment needed for making them. Drastic steps had to be taken to repair these grave deficiencies. Brilliant improvisation made it possible to solve the more immediate problems, but at great cost. By the end of the war the vital importance to the national economy, both in war and peace, of a strong organic chemical industry was fully recognised by the Government and legislative steps were taken in the years 1920 and 1921 to assist its future development.

The A.B.C.M.

IN 1916, the Association of British Chemical Manufacturers was formed to promote co-operation among the firms of the industry in its widest sense and to provide a central body for the industry in its increasing contacts with the Government and Government departments. The Association was to cover the whole field

of the industry's activity, excluding questions of labour and prices. It soon became recognised, not only by the Government but also by other industrial and trade associations, as the body speaking with authority on general problems relating to the chemical and allied industries. Its formation can thus be regarded as a landmark in the development of the British chemical industry. The Association has played a leading part in connection with all legislation affecting the industry, such as the Dyestuffs Act, the Key Industry Duties, the poisons legislation, the Factory Act and the revisions of British patent law. In 1938, it took, on its own initiative, active steps to promote the manufacture of those medicinal chemicals at that time imported from Germany, covered by German patent and likely to be essential to the health and well-being of the country in the event of war. Thus, largely owing to the Association's action, there was no major shortage of vital drugs when World War II broke out in September 1939.

Rationalisation

THE years between the wars saw much rationalisation in the industry. The end of World War I had brought pressing problems of re-organisation. In 1926, Imperial Chemical Industries, Ltd., came into being. The fundamental objectives underlying the formation of Imperial Chemical Industries were:—(a) To promote the efficiency of these chemical operations by appropriate re-organisation and sufficient centralisation to effect reduction in manufacturing costs, thus improving the competitive position of the industry in home and overseas markets; (b) to pool the resources of the constituent companies so as to permit the undertaking of construction and development schemes that might have been beyond the reach of the individual companies; and (c) to strengthen their activities by co-ordination of research and technical knowledge.

The formation of I.C.I. was hastened by the need for some strong British chemical unit to withstand the foreign combines threatening to become the chemical suppliers of the world, including this country and the British Empire. The competitive power resulting from the amalgamation of a large section of the British chemical industry enabled its leaders to meet their foreign rivals in the field on equal terms

The Industry in World War II

The part played by the chemical industry during World War II was commensurate with its great resources and involved activities in so many fields that only a fragmentary picture can be given within a reasonable space. The chemical industry was entrusted by H.M. Government with much of the work involved in the design and construction of new chemical plants for war purposes. In addition, the industry was in many instances charged with the responsibility of operating new factories. The volume of capital constructional work (apart from metal and ammunition plants) undertaken by the chemical industry for the Government during the war and the preceding rearmament period exceeded £50 millions. In addition, some 2,500 senior staff and key men were seconded for Government service, in either the Ministries or the new Government fac-

tories. The fundamental duty of the industry during the war was both to manufacture chemicals required specifically for war purposes and also to supply other industries with essential raw or intermediate materials. It also made a contribution to our needed export trade, to the remarkable extent of £25 to £30 million a year. In war-time the demand for many chemicals increases enormously.

The knowledge and experience gained during the inter-war period enabled the British chemical industry to establish the manufacture of essential chemicals at the request of Dominion Governments for the production of war supplies overseas. Notably, engineers from this country were responsible for the erection during the war of factories for the production of acetone in Australia, India and South Africa. Great progress was made during the war in the manufacture of medicinal chemicals.

CHANGES IN THE INDUSTRY

The chemical industry, more than any other, is aware that its future rests on the investigations of chemists in the laboratory. As these investigations have steadily continued, and, moreover, on an ever-increasing scale, in both academic and industrial research establishments of many kinds and in many countries, the chemical industry has changed and developed to keep pace with the advances of science and with the new requirements of other industries. Advancing knowledge of the mechanism of catalysis, of the use of high pressures and of gaseous kinetics generally, has had a major effect on the chemical industry. Earlier work led to the synthesis of ammonia from atmospheric nitrogen and the catalytic production of nitric acid from ammonia. This knowledge was duly applied to the production of synthetic methyl alcohol and later to the hydrogenation of coal and oil. The refining of crude petroleum was revolutionised by the use of catalysts and new methods for their application. With the advent of oil refining and cracking in this country, a similar development will occur within the British chemical industry. It may be said that it is the growth of the production and use of aliphatic, as distinct from aromatic, chemicals that has been one of the most marked features of the organic chemical industry of recent times.

The Effects of Plastics

Another factor having considerable effect on the industry as a whole has been the

rapid growth within it of its plastics section. The newer plastics, on the other hand, are based on chemical syntheses. The resins made from phenol and formaldehyde were the first to be used as moulding materials and they were followed by the cresol resins, urea-formaldehyde plastics, polymethyl methacrylate, polyvinyl chloride and polyethylene. The growth in production of these has had a profound effect on those sections of the chemical industry that provide the raw materials and intermediates. The need for phenol increased so greatly as to make supplies of phenol from coal tar insufficient and it became necessary to produce it synthetically from benzene. Urea was required in considerable quantity. Formaldehyde manufacture had to be increased substantially; this in turn required large quantities of methyl alcohol, which could not have been made available but for the increased knowledge of catalytic and high-pressure methods of chemical synthesis already mentioned.

Biological Advances

Applications of chemistry to biological problems have also had an important effect on the development of the industry and have led to the use of new synthetic chemical products in the fields of medicine, pest control and agriculture generally. As a result, large-scale production has been set up for such products as penicillin, streptomycin, sulphonamides, anti-malarials, vitamins and hormones, insecticides (D.D.T., benzene hexachloride) and the synthetic

selective weed-killers and plant growth substances. The biological field gives every promise of further important developments and these are likely to have a pronounced

ACHIEVEMENTS OF THE INDUSTRY

As a result of the shortage and consequent exorbitant price, of Japanese natural camphor during the first world war, a British company decided to develop the manufacture of synthetic camphor in this country. Research and development began in 1920 and production on a commercial scale started in 1928; the process was handicapped by the application of the Hydrocarbon Oil Duty to turpentine, the starting material for the process. Nevertheless, as a result of many improvements in subsequent years, a new plant has been built since the end of the second world war; this can produce sufficient synthetic camphor to supply all the technical and medicinal camphor required by this country and provide a substantial tonnage for export at competitive prices.

Sulphonamides

In 1935 Domagk had demonstrated in Germany the effectiveness of a dyestuff called Prontosil rubrum for the treatment of certain bacterial infections. His discovery gave a world-wide impetus to research. The dyestuff was a sulphonamide derivative and research in France soon showed that its antibacterial activity was due to the liberation of *p*-aminobenzenesulphonamide in the body. This compound had long been known to chemists, but its antibacterial action had never been suspected. Its value in puerperal fever was shortly established by clinical trials, which were undertaken in this country under the auspices of the Medical Research Council. The next vital step in this field was taken when sulphapyridine was prepared by British chemists towards the end of 1937, after nearly two years' intensive work. It was the first sulphonamide to contain a heterocyclic ring, and thus the father of a series destined to play an important part in the treatment of many diseases of bacterial origin. It was found effective in the treatment of animals experimentally infected with various strains of pneumococcus. In clinical trials it was found to reduce the mortality in pneumonia from 25 per cent. to under 10 per cent. A few months later the synthesis of sulphathiazole was achieved and this was found to be similarly active.

Although sulphamethazine was also

made in the United States, its medical application has been developed here; its antibacterial activity and its low toxicity have caused it to be widely used. Thus this country early took the lead in development of the sulphonamide drugs.

Antibiotics

Penicillin, as is well known, was discovered in this country and the first attempt to produce considerable quantities in the laboratory and to study its therapeutic value in the treatment of human and animal disease was also made in this country. British manufacturers were the first, even under the increasingly difficult conditions prevalent from 1941 onwards, to undertake large-scale production. Naturally all the material available during the middle war years went to treating Service and civilian war casualties. By arrangement between Governments, academic scientists and industrial firms, the change from surface culture, which had clearly reached its limits of expansion, to the deep fermentation process was left to American technicians to develop, but British firms were prompt to make use of information obtained from their American colleagues, so as to reorganise manufacture in this country on an equally large scale, and with continuous improvement, by deep fermentation. The production of streptomycin on a lesser scale because of its more limited use, did not involve for British manufacturers the same handicap as penicillin, for they were able from the outset to make use of the most modern procedures, and there has been a steady increase in its production during the last two years.

Antimalarials

The problem of producing anti-malarial drugs, always of interest to a country with a tropical colonial empire, became one of vital urgency with the outbreak of war. Synthesis of the German antimalarial drug Atebrin was made the first target, and a few hundred thousand tablets of it had been produced as early as 1940, under the name "mepacrine." Some thirteen separate organic syntheses were involved in its production. The steadily diminishing supplies of quinine for combating malaria provided a spur to research for even better

antimalarials. As a result, a further marked advance was registered with the invention of Paludrine, which appears to be proving itself a true preventative of malaria. Research leading to its preparation in 1944 was outstanding in quality, and the compound differs in chemical type from any of the pre-existing antimalarials.

Vitamins

Some of the vitamins are manufactured in this country by extraction or by transformation of natural products, others by complete synthesis. Outstanding amongst British achievements in this sphere must be reckoned the synthesis of calciferol (vitamin D). The production of this, the antirachitic vitamin, by irradiation was followed by the discovery of a method for taking it from ergosterol and separating it in pure crystalline form from the irradiated mixture. The method elaborated by British scientists was taken up by British manufacturers and the production from ergosterol of calciferol, through its dinitrobenzoate, has made possible the compulsory enrichment of margarine in this country.

It is almost certain that calciferol is today made on a larger scale in this country than anywhere else in the world; of the relatively small number of firms making calciferol throughout the world, British manufacturers alone produce sufficient to give them an exportable surplus over their home requirements, in spite of the considerable amount needed. Vitamin C (ascorbic acid) and vitamin B₁ (aneurine, thiamin) are both manufactured synthetically in this country. Concentrates of vitamin A and vitamin E from natural sources have also been made in this country on a considerable scale. It was in a British laboratory that the substance in liver responsible for the prevention and treatment of pernicious anaemia was isolated almost simultaneously with its independent isolation in the United States. Reference may now be made to work on hormones, and in particular to the production of the so-called synthetic oestrogens, stilboestrol, hexoestrol and dienestrol. Their discoveries are entirely British and their manufacture was at first confined to the U.K.

Agricultural and Veterinary Products

It was as a consequence of the scientific genuity of two separate groups of British investigators that work on plant enzymes was developed into the production of selective weed-killers. These substances are now being used on a large scale for the reduc-

tion of weeds among cereals. Discovery of the insecticidal properties of D.D.T. was made in Switzerland, but British chemical industry has played an important part in developing its applications. Similarly effective in the destruction of many types of insect is the gamma isomer of benzene hexachloride. Among the methods being developed is the thermal generation of smoke containing the active ingredients. A further achievement has been the recent production of Antrycide, an outstanding trypanocide for the treatment of sleeping sickness in cattle. It is the first drug with a strongly prophylactic as well as a curative action, and its use is expected to have a far-reaching effect in opening up areas previously uninhabitable owing to tsetse fly infestation.

By 1938 the annual production of plastic materials had reached 30,000 and by 1948, 130,000 tons.

Polymethyl methacrylate. This was discovered in 1932 and the first applications of the plastic were for dental products and for use in the moulding industry. By 1936 sales of sheet (Perspex) were becoming important and by 1939 sufficient knowledge had been accumulated for production to be stepped up and kept in advance of the large requirements for war purposes; in the peak year these reached 4,700 tons.

Polythene. The first sample of polythene was synthesised in the U.K. in 1933 as an indirect result of studies of the chemical effects of high pressures. The translation of laboratory results to a manufacturing scale was difficult: enormous pressures, of the order of 1,000 atmospheres, were needed to induce the required polymerisation of ethylene and special techniques for handling them had to be evolved after systematic research. Further development of polythene production in the U.K. is in hand and by 1950 the capacity should exceed 10,000 tons a year.

Polyvinyl chloride. Polyvinyl chloride itself as a chemical compound had been known for about 50 years before it was discovered how to produce a commercial plastic from it. By 1941 the U.K. production capacity for polyvinyl chloride polymer was about 500 tons a year and most of the applications that are of commercial importance today had been studied on a small scale. By 1944 a Government plant, with an annual capacity of 5,000 tons, had been erected and was in operation. To meet increasing demands the industry has raised its annual productive capacity to 18,000 tons.

THE INDUSTRY'S PRODUCTS

THE products of the chemical industry are described in the report under the following headings. Abstracts from some of the sections are given below.

1. Sulphuric acid.
2. Alkalis (including chlorine).
3. Other inorganic acids and salts (including carbide).
4. Industrial gases.
5. Nitrogen fertilisers.
6. Soluble phosphate fertilisers.
7. Other chemical fertilisers.
8. Heavy organic chemicals.
9. Chemicals for pharmaceutical and veterinary products.
10. Miscellaneous fine chemicals.
11. Dyestuffs and intermediates.
12. Pigments.
13. Explosives (industrial only).
14. Chemicals for pest control and for agricultural and horticultural purposes not elsewhere included.
15. Plastic materials and synthetic resins.
16. Miscellaneous chemicals not covered by the above groups.
17. Coal tar distillation products.

Medicinal Fine Chemicals

This group and the following one cover a considerable number of large and small firms and thousands of substances. Not a few of the smaller firms have been established for many years and have often specialised in selected fields of this complex industry; by their products and services they have achieved an excellent reputation both at home and overseas. Medicinal fine chemicals include compounds, for the most part organic, wholly or partly made by synthetic processes and required for the prevention or treatment of human and animal disease. They do not include insecticides or pesticides although these also play an important part in combatting disease. During the past thirty years remarkable progress, due in part to the operation of the Key Industry Duties, has been made by British manufacturers of medicinal fine chemicals. Today the industry produces a wide range of compounds of great therapeutic value, either prepared synthetically or obtained from naturally occurring substances. Steady progress continues, thanks to the extensive research effort being made both by the

industry itself and by Government departments, particularly the Medical Research Council, and to the collaboration between them. The advances made in this branch of chemical manufacture are clearly indicated by official pharmacopœias. At the outbreak of World War I the 1898 British Pharmacopœia was still operative; it contained monographs on only four synthetic drugs. When in due course the 1914 B.P. appeared, over one-third of approximately 250 "active principles" included were synthetic compounds, while more than half of the 440 substances described in the 1948 B.P. are products of the laboratory and factory.

Fine Chemicals

Fine chemicals (other than medicinal) are a large group including many thousands of different compounds. Most of them are used in relatively small quantities, in pounds that is, rather than in tons or even hundredweights. They are, all the same, of great importance to industry as a whole and particularly to the chemical industry itself. They include not only chemicals necessary for work in research and analytical or control laboratories, but also a very large variety of esters, organic bases, salts and other compounds needed for perfumery and flavouring essences and in the textile, rubber and many other industries. Important advances have been made here in the standards for reagents used in analytical work, and those made in Britain are now of a purity equal to that of the products made before World War II by any German manufacturer. Similarly there has been a marked improvement in the quality of photographic chemicals required for the manufacture of emulsions, films, plates, paper, for developing and fixing and for making coloured reproductions. Special demands for new and improved fine chemicals have been created by the important advances made in the photographic industry during the last two decades.

PATENTS AND MONOPOLY

BRITISH patent law has recently been the subject of critical review by a Departmental Committee appointed by the President of the Board of Trade in April 1944. In order that the views of the chemical industry might the more conveniently be placed before this Committee a memorandum was prepared by a Joint Chemical

Committee on behalf of the A.B.C.M. and the learned societies and professional bodies connected with chemistry. These recommendations were adopted by the Departmental Committee and have been incorporated in the Patents and Designs Act. In the Monopolies and Restrictive Practices Act, the "conditions to which the

Act applies" are held to prevail if in the United Kingdom or "any substantial part thereof" at least one-third of the goods in question are supplied or processed or exported by one person or by two or more who conduct their affairs so as to restrict competition. All too often the word is used in a sense implying that there is something inherently objectionable in a monopoly and may unfairly place a stigma on those who by no means deserve it. A monopoly, be it based upon the legal right attaching to the grant of a patent or upon other circumstances, often operates to the public advantage. Within the chemical industry there are a large number of products, not protected by patent, that are made exclusively or predominantly by a single firm. These economic monopolies are an essential feature of the industry's efficient operation. In general they arise from three causes:—(a) The small demand for certain chemicals; (b) the need for specialised and costly plant; (c) the technical knowledge and experience essential for some processes. In the production of a particular chemical it is more economic that the demand should be met by a very few or even by a single manufacturer,

rather than by a large number, who would of necessity be operating small units of lower efficiency. Indeed, the cost of plant and the technical control needed to obtain high yields may well be such as to make the effective operation of a process only possible if it is carried out on the largest scale justified by the demand.

Reference should be made to the monopolistic tendency that can result from price conventions. Under these, manufacturers, otherwise operating independently, agree upon selling prices. These conventions may also assist improvement in the quality of products and in the promotion of consumer service; further, by exchange of information they may lead to increased technical efficiency and sometimes even to rationalised production. It is, however, recognised that price agreements can also give rise to dangers, in that a group of manufacturers might not be influenced to the same degree as an individual manufacturer by fear either of criticism or of competition. The chemical industry welcomes the Monopolies and Restrictive Practices Act because it will protect the public against undesirable restrictive practices by industry.

LOCATION OF FACTORIES

The main considerations influencing the location of chemical factories are the following: they are of such importance that to ignore any one may spell the difference between success and failure:—(1) Easy access to raw materials including coal. (2) Availability of gas, electricity and other services. (3) Plentiful supplies of water suitable for steam raising and for process and cooling purposes. (4) Availability of suitable labour and accommodation therefor. (5) Facilities for the disposal of trade waste, whether solid, liquid or gaseous. (6) Safeguards against the hazards of the processes. (7) Proximity to markets and availability of the preferred method of transport (i.e., road, rail, canal or sea) in order to keep distribution costs low.

A few specific instances of how the above considerations have influenced the choice of locations for chemical factories may be of interest. The high concentration of heavy chemical industry in South Lancashire and Cheshire is due largely to the existence in Cheshire of the main salt deposits in the United Kingdom; in addition there are the advantages of easy access to the ports of Liverpool and Manchester, the facilities of the Manchester Ship Canal, the network of railways and

other communications and proximity to the important chemical consuming industries also situated in the same area. The South Wales area was selected for the manufacture of calcium carbide because of its proximity to limestone of suitable quality. The manufacture of hydrogen peroxide was established at Luton, the centre of the straw hat industry, the main consumer at that time.

Since World War II new factors have arisen. The Government has imposed restrictions on the construction of factories in certain areas in its desire to establish new industries in what are now called development areas. In addition, under the provisions of the Town and Country Planning Act, local authorities have sometimes objected to the erection of new chemical factories, or the extension of existing ones, in or near residential areas.

Another post-war factor that frequently influences the siting of a new factory is the difficulty of obtaining buildings in which to house plant. This consideration has sometimes compelled firms to instal plant in unsuitable or badly located buildings because these happen to be available, with the result that the plants are less economic to operate.

TRENDS AND EXPANSION OF THE INDUSTRY

THE firms supplying information to the A.B.C.M. have all submitted their proposals for expansion of production and replacement of equipment (other than normal maintenance) over the next five years. The schemes have been collected and arranged by groups. The schemes cover not only the expansion and rehabilitation of productive capacity, but also the provision of essential ancillary services and amenities. The following tables have been abstracted from the report which also contains similar tables relating to other sections of the industry.

Chemicals for Pharmaceutical and Veterinary Products

1. Number of firms in Group: 52.			
	Number	Estimated Cost £	
2. Schemes in progress ...	48	3,642,000	
3. Schemes awaiting licence	13	385,000	
4. Schemes still tentative	42	3,104,000	
5. All schemes ...	103	7,131,000	
Amount already spent ...		1,463,000	
	Annual Tonnage	Annual Value £	
6. Present productive capacity ...	—	32,144,000	
7. Total productive capacity on completion of schemes ...	—	56,119,000	
8. Decrease in imports ...	—	975,000	
9. Increase in exports ...	—	8,956,000	
10. Extra employees required: 2,110.			

Expansions will take place in the production of practically every medicinal chemical of importance, though to varying extents. *[The details are confidential to the Board of Trade and have been omitted for publication.]*

Miscellaneous Fine Chemicals

1. Number of firms in Group: 52.			
	Number	Estimated Cost £	
2. Schemes in progress ...	37	1,351,000	
3. Schemes awaiting licence	3	93,000	
4. Schemes still tentative	17	418,000	
5. All schemes ...	57	1,862,000	
Amount already spent ...		407,000	
	Annual Tonnage	Annual Value £	
6. Present productive capacity ...	—	14,833,000	
7. Total productive capacity on completion of schemes ...	—	23,038,000	
8. Decrease in imports ...	—	1,681,000	
9. Increase in exports ...	—	4,063,000	
10. Extra employees required: 1,230.			

This Group covers a very large number of chemical products—mainly in the synthetic organic field—made for the most part in comparatively small quantities.

[The details are confidential to the Board of Trade and have been omitted for publication.]

Chemicals for Pest Control, Agricultural and Horticultural Purposes

1. Number of firms in Group: 29.			
	Number	Estimated Cost £	
2. Schemes in progress ...	7	184,000	
3. Schemes awaiting licence	3	276,000	
4. Schemes still tentative	10	225,000	
5. All schemes ...	20	686,000	
Amount already spent ...		23,000	
	Annual Tonnage	Annual Value £	
6. Present productive capacity ...	86,415	6,763,000	
7. Total productive capacity on completion of schemes ...	96,812	9,390,000	
8. Decrease in imports ...	—	—	
9. Increase in exports ...	—	341,000	
10. Extra employees required: 270.			

This group does not include tar distillation products used for pest control. As with pharmaceutical products, no cognisance is taken of the compounding of the preparations as finally used, and there is thus a wide range of important activity in the field outside the scope of this report.

[The details are confidential to the Board of Trade and have been omitted for publication.]

Plastic Materials and Synthetic Resins

1. Number of firms in Group: 38.			
	Number	Estimated Cost £	
2. Schemes in progress ...	55	17,447,000	
3. Schemes awaiting licence	4	553,000	
4. Schemes still tentative	30	3,974,000	
5. All schemes ...	89	21,974,000	
Amount already spent ...		7,859,000	
	Annual Tonnage	Annual Value £	
6. Present productive capacity ...	185,738	37,741,000	
7. Total productive capacity on completion of schemes ...	339,189	71,881,000	
8. Decrease in imports ...	—	975,000	
9. Increase in exports ...	—	341,000	
10. Extra employees required: 4,500.			

[The details are confidential to the Board of Trade and have been omitted for publication.]

FUTURE OF THE CHEMICAL INDUSTRY

THE primary object of this Report has been to ascertain whether the plans of the British chemical industry are adequate to the part it has to play in the national economy. It is considered that the data recorded, and the various proposals outlined, make it possible to answer this question in the affirmative. Detailed replies were received from 272 firms, and it is clear that the facts and figures given in this report accurately reflect the industry's activities. These replies have afforded full information about the industry's plans for rehabilitation and expansion and the expenditure to be incurred in giving them effect, about the numbers of staffs and operatives in various categories, and about many other matters, some of them highly technical; in addition, details were supplied about the amount of capital employed by each firm. The capital employed is defined in the manner usual in accountancy, that is to say, it includes issued capital, debentures and loans, with all sums designated capital or revenue reserves for the purposes of the Companies Act, 1948, but less investments other than trade investments. On this basis the total capital employed in the industry at the end of 1948 was £230,637,000.

Production

The most recent figures available for the production are those contained in the partial census of production carried out by the Board of Trade in 1946. This gives for the industry's products a value of £212,000,000. Since that date the industry has expanded considerably; on the other hand, the Board of Trade definition is wider than that adopted in this report as it omits fertilisers and explosives. The nearest estimate to be safely made is that the industry, as defined in this report, probably produced in 1948 chemicals to the value of at least £250,000,000, though production capacity at the end of 1948 was £347,000,000. At that date, 22,000 employees utilised a total capital of £231,000,000 with an annual production capacity of £347,000,000, whereas according to forward plans only 25,000 additional employees will be required to create new capital expenditure of £91,000,000 with an additional production capacity of £223,000,000. That the volume of production of the industry has been steadily increasing there can be no doubt. Evidence of this is avail-

able from various sources. The London and Cambridge Economic Service made an estimate that the output of the chemical and allied industries in 1946 exceeded that of 1935 by almost one-third. The same Service estimates that the year 1948 showed a further increase of 17 per cent. over 1946. Confirmation of this estimate is to be found in the Interim Index of Industrial Production published by the Central Statistical Office, which puts production for the "chemical and allied trades" in 1948 at 20 per cent. above that in 1946. The forward plans for the industry provide for a further increase in production capacity of 70 per cent. during the five years from the end of 1948. Making allowance for tentative schemes that may not come to fruition by 1953, there are reasonable grounds for believing that the rate of increase in production attained during 1947 and 1948 will be maintained for at least the next three years. In 1951 the output of the industry should be 50 per cent. greater than in 1946.

Effect of Increased Production on Exports

The trade and Navigation Accounts (Group III (O)) give the following figures for exports (excluding re-exports):—

	1938	1946	1947	1948
Value in £000's ...	22,280	66,086	67,426	83,670

When corrected for change in value, 1948 exports represent an increase of 56 per cent. by volume over 1938. The export target set by the Board of Trade for the end of 1948 was £8.05 millions per month, but the industry fell a little short of this target (December, £7,347 million).

The distribution of these exports (which exclude plastics) is very wide. The principal markets were India and Pakistan, which together took 13 per cent. of the total chemical exports in 1948, Australia 6 per cent., South Africa and Argentina each 4½ per cent. About one-half of the exports went to Commonwealth countries. Outside the Commonwealth the best customers were Argentina, Sweden, Egypt, U.S.A., France, Netherlands and Iran in decreasing order of value. Plastics exports (Group III (U)) were £4,710,000 in 1948.

Adequacy of Industry's Plans

Within the heavy inorganic chemical groups it is possible to forecast overall requirements with some accuracy. There is a long user history—50 to 100 years—

showing a steady increase in demand little affected by trade cycles or fluctuations. Expansion of production has been planned in the light of this knowledge and, when the schemes now in progress have been completed, there should be ample capacity to meet normal demands for some years and such fluctuations as past experience indicate to be likely. In both groups the projected increase is about 50 per cent.

The progress of modern industrial chemistry is particularly reflected in the production of heavy organic chemicals and to a lesser extent in the pharmaceutical and fine chemical groups. Here the heavy capital expenditures already in hand and projected arise largely from the development of the production from oil of many diverse organic chemicals. The schemes, when completed, should virtually remove the need to import from U.S.A. and should also add very substantially to exports. A particularly important expansion in this field is that of synthetic detergents. Not only are these products of great practical value in themselves, but their use reduces the demand for soap and thus helps to ease the call on the world's continuing inadequate supply of fats and oils.

Today the chemical industry employs some £231,000,000 of capital, which, as has been noted, probably represents £400,000,000 in terms of today's costs. This report details schemes of replacement and expansion calling for the expenditure of £191,000,000, to two-thirds of which the industry has already committed itself. When all these schemes are completed, the production capacity of the industry will be increased 70 per cent. In addition, the industry is now spending on research £8,500,000 annually and proposes to expend £11,400,000 annually when projects for additional research facilities, involving capital expenditures of more than £8,000,000, are completed. It is unlikely that this large expenditure on research is exceeded in any other industry; it compares well with corresponding figures in other countries—for instance, in U.S.A. The figures speak for themselves and reflect the initiative believed to characterise the industry.

During the past decade the chemical industry, in common with many others, has felt the adverse effects of the many Governmental controls. Whilst the need for control of industry by Government during the war is not questioned, the long continued extension of controls, the strict limitation of imports and the existence of

a sellers' market—fostered in some degree by bilateral trade agreements—has tended to discourage free competitive initiative, which will again be vital to success as the buyer once more exercises discrimination. These factors have affected the chemical industry as well as others and the question may well be asked whether, in the face of competition in overseas markets, particularly from U.S.A. and Germany, the chemical industry can, in fact, secure the large increases in export trade for which it plans. The action that the industry is taking will, it is believed, result in production costs that are internationally competitive, but this alone will not secure exports. There is also needed personal contact with the buyer and first hand knowledge of his local problems, coupled with provision of that technical service to the consumer which has been developed in the home market. For these purposes a wide extension of overseas services and overseas companies acting as the spearheads of British chemical manufacture will be increasingly called for. In pursuance of these aims, the industry must co-operate with the nationals of other lands. For this purpose there is necessary, not only a rapid relaxation of the various restrictions on overseas operations suffered by the British chemical industry, but also the maintenance by that industry of methods and organisations that will make it an acceptable partner to overseas associates. Only thus can be secured on the one hand the best possible platform for the sale of the new products that the industry's rapidly developing science and technique and its heavy capital commitments will make available, and, on the other, a share in the production of those basic chemicals which countries with developing economies will insist on making for themselves.

Continued success must, however depend on research, new discoveries and inventions, new processes and new products and it is hardly possible to over-emphasise the supreme importance to be attached to the expanded research programmes mentioned earlier in this report; in this rapidly advancing chemical age the inherent scientific skill of the nation can alone enable us to keep in the van of progress, where this country belongs.

(To be concluded).

Copies of the Report of the Chemical Industry may be obtained from the Association of British Chemical Manufacturers, 166 Piccadilly, London, W.1, price 5s. post free (U.S.A., \$1.25).

PHARMACEUTICAL SOCIETY OF NORTHERN IRELAND

MEETING of the Council of the Pharmaceutical Society of Northern Ireland was held in Belfast on January 20, the president (Mr. P. R. W. Shinner) in the chair. Also present were Messrs. H. W. Gamble (vice-president), W. H. Boyd (treasurer), Abernethy, W. P. Ewart, James Irwin, F. Moore, J. McGregor, W. C. Tate, Professor E. B. C. Mayrs, M.D., Dr. H. D. Hazley, and Mr. W. Gorman (secretary). On the motion of Mr. W. P. EWART, seconded by Mr. J. IRWIN, it was agreed to accept a quotation for a mahogany board on which to record the names of students who had achieved Gold Medal standard in the Society's final qualifying examination. After the secretary had reported on the composition and powers of

Poisons Board in Great Britain, it was agreed to defer, until a later date, further consideration of the letters from the Ministry of Home Affairs proposing the formation of a similar Board in Northern Ireland. The Law Committee was empowered to deal with the matter should a reply be required in the meantime.

A letter was received from the Ministry of Agriculture stating that the scheme whereby Cymag powder was made available to farmers at a reduced price would be terminated in the near future and that payment to retailers of the balance of cost could only be made on or before March 31.

A letter was read from the Ulster Chemists' Association concerning the collection of Health Service prescriptions by a chemist's superintendent at his private residence. The secretary was instructed to inform the Association that the Ministry's pharmacy inspector had already drawn the attention of the superintendent to the relevant section of the Medicines, Pharmacy and Poisons Act.

Position of Registered Druggists

The position of Registered Druggists who had suffered by the introduction of the Health Services Act was outlined by Mr. IRWIN, who had been asked to bring the case before the Council. He inquired if it would be possible, by examination or otherwise, to permit Registered Druggists to play their full part in the Service. After discussion, it was agreed that, in view of the Council's present educational policy, it would be impossible to assist the Registered Druggists by any other than the full qualifying examination. Present pharma-

ceutical legislation would require to be amended before any special examination could be held. If the Registered Druggists wished to state their case further the Council would be prepared to receive their representatives at its February meeting.

The report of the Education Committee, which recommended the granting of certificates of apprenticeship to Mary Agnes Duddy, Belfast, John Alexander Houston, Magherafelt, John Morrissey, Belfast, and Samuel John Morrison, Whitehead, was approved. The report of the board of examiners on the examinations held in December 1949, was received; it showed that, in the Final Qualifying examination, twenty-five candidates had been successful and thirteen referred in one subject. In the Preliminary Scientific examination fifteen candidates had passed and fourteen referred in one subject. After the meeting, certificates were presented to successful students, who were addressed by THE PRESIDENT. MR. J. KERR returned thanks on their behalf.

Mr. Fred Storey, C.B.E. (chairman, Ulster Chemists' Benevolent Fund), attended the meeting to discuss the future of the Fund. His Committee's suggestion was that the president, treasurer and secretary of the Society should act as chairman, treasurer and secretary, respectively, of the Fund, and that the meetings of the Fund Committee should be summoned by those officers and held in the Society's building. On the motion of MESSRS. H. W. GAMBLE and W. H. BOYD, this was agreed to.

A PHARMACIST'S ANTHOLOGY

HERE was to be found the short, simple, but absolutely infallible remedy for rheumatism, which produced its astounding results in under fifteen days. Here was Dr. *Ralalife's Recipe for a Consumption*, consisting of crabs' claws finely powdered, asses' milk, and crabs' eyes. And here—in *Mr. Jenison's Recipes, Both Galanicall and Chemicall Who First Teach Us to Make Our Drugs in the Year 1702*—is the account of the virtue contained in *Lady Carrington's Cerecloth*, which "cured ye King's evil or any other sore by washing your sore with milk or butter and beere" and "applying this cerecloth till it's cured."—From "*I Leap Over the Wall*," by Monica Baldwin.

MISCELLANEOUS INQUIRIES

Dental Mechanics' Wax.—*W. H. M.*—The wax used by dental mechanics is usually a blend in which the principal ingredient is beeswax. The following is a representative formula:—

Carnauba wax	10
Hard paraffin (melting point 70°)	35
Beeswax	55

Anti-freeze Solutions.—*A. D. B.*—Below is a table of the freezing points of various concentrations of glycerin in water:

Glycerin Per cent	Water Per cent.	Freezing Point (°F.)
10	90	27
20	80	23
30	70	15
40	60	4
50	50	-9
60	40	-30
66.7	33.3	-52

Scrotal or Inguinal Truss?—*A. J.*—If a prescription is presented for an inguinal truss, and on examination it is considered that a scrotal truss is required, it is normally advisable to return the prescription to the prescriber with a discreet note of explanation. If the prescription reads "Truss for inguinal hernia," then the fitter may reasonably argue that a scrotal is also an inguinal hernia (see *C. & D.* booklet, "The Fitting of Trusses and Elastic Hosiery," p. 2), and fit the patient with a scrotal truss.

Denture-cleaning Preparations.—*S.-M.*—Alternative formulas for preparations used for cleaning dentures by soaking are given below:—

I		
Sodium bicarbonate ...	...	2 oz.
Sodium perborate ...	...	2 oz.
Liquefied phenol ...	...	10 min.
Thymol ...	...	¼ gr.

II		
Borax ...	...	4 oz.
Sodium perborate ...	...	2 oz.
Menthol ...	...	10 gr.

Dissolve a teaspoonful in a tumblerful of hot water and allow the denture to remain in the solution as long as convenient.

Swine Fever.—*P. O'R.*—The protective injection recommended by the Ministry of Agriculture and Fisheries in swine fever (a contagious disease caused by a virus which attacks pigs of any age or breed and either sex) is swine fever (crystal violet) vaccine. Injected into healthy susceptible pigs, this affords a high degree of protec-

tion for about twelve months (serum protects only for about ten days). The vaccine has no curative action, and a period of fourteen days following injection necessary before protection is fully established. A veterinary surgeon should be consulted.

Camphor Ice.—*E. J. W.*—Below are two formulas for preparing camphor ice:—

I		
White soft paraffin ...	...	8
Hard paraffin ...	...	5
Camphor, powdered ...	...	2

Melt the hard paraffin and white soft paraffin and stir in camphor until dissolved. Cast into oblong flat pieces and wrap in paraffin paper.

II		
Heavy liquid paraffin ...	...	120
Hard paraffin (m.p. 128-130 F.)	...	362
White soft paraffin ...	...	482
Camphor, powdered ...	...	36

Cream for Dry Skin.—*K. B. O.*—Creams for use on dry skins generally contain a higher proportion of fatty ingredients as indicated in the following formula:—

(a) White petroleum jelly ...	...	35.0
(b) White beeswax ...	...	10.0
(c) Spermaceti ...	...	5.0
(d) Lanolin ...	...	5.0
(e) Borax ...	...	0.5
(f) White mineral oil ...	...	33.0
(g) Distilled water ...	...	10.9
(h) Perfume ...	...	0.5
(i) Nipagin M ...	...	0.1

Melt (a) (b) and (c) add (d) and (f) and bring the temperature to about 145°. Dissolve (e) in hot (g) and bring the temperature to 145°F. Strain the melted fats and oils into the mixing kettle, start the agitator and add (c) solution. Continue mixing until temperature drops to 115° and add (h). Dissolve (i) in a little alcohol and mix well into the bath.

Worm Killer.—*T. C. R.*—Copper sulphate for use as a worm killer on bowling greens, etc., is applied as a solution of 1 lb. in 50 gall. at the rate of ½ gall. per sq. yd. The treatment may involve slight browning of the lawn, but the effect wears off in ten days or so. If desired, a small amount of ammonium sulphate may be incorporated, the purpose being to apply fertiliser at the same time as the worm killer. The solution is most effective when applied on a warm, muggy day when the worms are near the surface.

CORRESPONDENCE

Formulation of a Mixture

SIR,—Since we are to have a new formulary for N.H.S., I suggest that mist. cot. cit. cum hyoscy. be altered to its old form without chloroform. The precipitation of what I presume to be colouring matter from the hyoscyamus makes the present formula very objectionable.

Rochdale JOHN B. PARRY.

[The mixture in the National [War] formulary was made with plain water; the B.F., 1949, formula prescribes the same quantity of chloroform water].

"Hall" Dispensers

SIR,—Some of the arguments advanced by your correspondent, J. Carey (*C. & D.*, January 14, p. 59) against the employment of hospitals of persons holding the diploma of the Society of Apothecaries are indisputably correct, but there are others with which I beg to disagree. I am one of two "Hall" dispensers employed in a busy pharmaceutical department of a general hospital and I strongly dislike the implied suggestion of unreliability. Although perfectly aware I have no legal responsibility, I have a responsibility to the chief pharmacist and my conscience, and in over twelve years of hospital dispensing I have never had a complaint. The statement that "Hall" dispensers should not be allowed to dilute labour in hospitals can scarcely claim to be moving with the times. There are many hospitals whose pharmaceutical services would have had to be, and still would be, drastically curtailed were it not for the assistance of the unacknowledged "Hall" dispenser, whose salary, even after twenty years' of more experience, cannot justifiably bear the tag "attractive."

Sutton-in-Ashfield. A. A. ASTLING.

Education and Man-power

SIR,—The Pharmaceutical Society by its educational policy is striving to establish pharmacy as a profession. In the process the chemist and druggist is being eliminated, and the final product is apparently to be a university graduate in pharmacy. Equality with medical practitioners is attained what sort of "prescriber-dispenser" relationship will be established? At the moment chemists and druggists find that, owing to a shortage of numbers, they enjoy reasonably good salaries and conditions, and from my own experience are on

greatly improved terms with medical men as compared with forty years ago. Much of this is undoubtedly due to the higher standard of pharmaceutical education, which has so far kept in step with general progress in all directions. Is there any sound reason, therefore, for scrapping the chemist and druggist qualification? If our leaders who advocate the policy of elimination would realise that there will be room for both qualifications for many a long day, they would ensure the survival of the Pharmaceutical Society instead of its extinction. By its present policy the Society may soon lose its status as an examining body. What would remain of its functions could be carried out by a branch of the Civil Service.

Cupar, Fife.

R. S. WHITELAW.

ACTION COMMITTEE ON PRICE PROTECTION

AN announcement issued to the Press by the Fair Prices Defence Committee, 43 Gordon Square, London, W.C.1, states that, after preliminary meetings and discussions following the publication of the Lloyd Jacob report on Resale Price Maintenance, it was decided by the Fair Trading Congress that those of its member organisations directly or indirectly interested in preserving the collective system of price-protection should constitute an independent Action Committee for the purpose of safeguarding that system by all proper means. On this Committee, which adopted the title Fair Prices Defence Committee, are represented the Grocery Proprietary Articles Council, National Federation of Grocers' and Provision Dealers' Associations, National Union of Retail Confectioners, Association of Dental Manufacturers and Traders of the United Kingdom, Hairdressers' Trade Association, National Pharmaceutical Union, Photographic Dealers' Association, Proprietary Articles Trade Association, Stationers' Association of Great Britain and Ireland, National Union of Retail Tobacconists, Wholesale Tobacco Trade Association, Brands (Wines and Spirits) Protection Association, and National Chamber of Trade. The officers are: *Chairman*, Mr. H. E. Chapman (P.A.T.A.); *Vice-chairman*, Mr. H. W. Holt (Stationers' Association); *Treasurer*, Mr. W. Herman Kent, O.B.E. (Grocers' Federation and G.P.A.C.); *Secretary*, Miss H. E. Hobbs, 43 Gordon Square, W.C.1.

OVERSEAS TRADE IN 1949

Statistics compiled from the Trade and Navigation Accounts

	Imports		Exports (U.K. Goods)		Total Export
1949	£2,272,481,188	...	£1,784,383,343	...	£1,842,996,12
1948	£2,078,040,435	...	£1,581,797,383	...	£1,646,495,096
1947	£1,794,540,460	...	£1,138,276,478	...	£1,198,115,70
1938	£919,508,933	...	£470,755,320	...	£532,279,966

DESCRIPTION	IMPORTS		EXPORTS	
	1948	1949	1948	1949
Chemicals, drugs, dyes, etc. (group total)	30,735,484	25,331,077	83,581,147	86,093,724
Salicylic acid and salicylates	—	—	314,562	372,400
Disinfectants, insecticides, weed killers, cattle dressings, etc.	—	—	3,992,439	3,253,180
Glycerin	—	—	190,206	—
Iodine	376,145	390,628	—	—
Menthol	210,467	244,845	—	—
Cream of tartar	—	—	28,244	35,800
Spirits (perfumed)	—	—	692,538	570,610
Drugs and medicines (miscellaneous manufactures)	830,667	1,091,763	15,746,351	18,371,700
Proprietary medicines	234,459	186,390	5,111,775	4,984,610
Quinine and quinine salts	59,506	—	393,326	448,220
Aspirin	—	—	344,135	452,680
Insulin	—	—	385,810	428,560
Penicillin	—	—	2,048,288	2,539,010
Ointments and liniments	—	—	627,245	825,580
Drugs, etc., raw or simply prepared	1,224,104	1,675,789	—	—
Cinchona bark	196,384	239,761	—	—
Ipecacuanha and other roots (total)	317,389	291,681	—	—
Cod-liver oil	31,101	58,509	596,136	575,060
Olive oil, refined	1,476,791	917,392	—	—
Essential oils, natural	1,994,489	2,390,465	436,040	469,540
Toilet soap	—	—	1,192,823	2,130,980
Perfumery and toilet preparations, excluding spirits, essential oils and soap (total)	83,602	84,274	2,952,127	4,047,500
Dental preparations	—	—	572,233	810,560
Cosmetics	—	—	935,983	1,441,070
Toilet requisites (excluding brushes)	31,979	—	155,679	145,880
Tooth and dental brushes	—	—	154,691	292,810
Hair, shaving and other brushes	—	—	352,329	322,110
Cameras, etc.	228,411	213,123	962,078	1,208,950
Medical, surgical instruments, etc. (except optical)	84,667	95,430	555,655	531,370
Surgical and medical plasters	—	—	595,718	714,460
Other druggists' wares (unspecified)	—	—	563,433	856,040
Bandages	—	—	252,630	312,260
Cotton wools and gauze tissues	—	—	432,462	508,440
Other dressings	—	—	485,740	771,390
Chemical glassware	—	—	578,630	568,620
Chemical machinery	271,202	1,547,091	2,208,918	3,667,810

RE-EXPORT totals were as follows: Chemicals, drugs, dyes, etc., 1949, £490,10 (1948, £792,352); manufactured drugs and medicines, £160,810 (£375,968); drug raw or simply prepared, £251,903 (£326,013); essential oils £207,809 (£170,627) cod-liver oil, nil (£894).

TRADE REPORT

Not quotations for pharmaceutical chemicals represent the prices for wholesale quantities of standard quality. Prices of crude drugs and essential oils vary as to brand or grade.

8 Essex Street, W.C.2, Feb. 1
THE MARKETS for PHARMACEUTICAL and FINE CHEMICALS continue to attract a good volume of export inquiry, with a substantial amount of new business being done. From today, in the home trade, several chemicals are advanced in price. MAGNESIUM CARBONATE, LIGHT, is increased one penny, and MAGNESIUM OXIDE, GHT, by fourpence per lb. BENZOIC ACID is also dearer by fourpence, and SODIUM BENZOATE by twopence per lb. New rates for METHYL SALICYLATE are higher by twopence. Owing to increased cost of raw material, a rise of 4s. per lb. has occurred in prices of VANILLIN. SULTANILAMIDE is also dearer. The new schedule for COCAINE represents an appreciable increase on former prices. Business in CRUDE DRUGS continues slow. Japanese AGAR is firmer for shipment. Cheap ALOES is in small supply and prices have advanced at source. A further rise is occurring in prices of BALSAM TOLU on the other side and spot values have moved up in sympathy. A small inquiry has been received for CASCARA SAGRADA on the spot but little business is reported. SUGAR is attracting few buyers at current high prices — supplies in Portugal are thought to be very low and quotations are above spot prices. GINGER is a quiet market. No improvement has occurred in the demand for IPECACUANHA; quotations are unchanged. Holders of SENEGA are willing to accept lower prices in view of the disappointing level of demand. Brazilian MENTHOL is dearer on the spot; supplies of Chinese material are coming upward in greater quantity. In the ESSENTIAL OILS market, Chinese star ANISE is easier at origin and the spot market is steady at slightly lower prices. PEPPERMINT is a firm market. Unconfirmed reports of a cyclone in Réunion are responsible for higher prices asked for Bourbon GERANIUM OIL.

S. Drug and Chemical Report New York, January 27

THE most important feature of the PHARMACEUTICAL and FINE CHEMICAL market during the past week has been a reduction in bulk prices of PENICILLIN—the sodium salt is now 4½ cents per 100,000 units, while potassium crystalline (G) is 3½ cents. The lower prices now quoted for AMINOSALICYLIC ACID have resulted from competition by foreign-produced material. Despite the arrival of about 5,000 lb. of MENTHOL from China—the largest consignment from this source for some time—any increased demand would probably result in an increase in the cur-

rent spot value of \$10.60 per lb. There are still several articles in short supply in the CRUDE DRUGS and SPICES markets, including ERGOT and RHUBARB, GINGER and East Indian NUTMEGS. Limited trading has brought about a cut in BLACK PEPPER prices, while WHITE PEPPER is down as a result of an increase in stocks. Firmer markets are reported from PAPAIN, Mexican SARSAPARILLA and QUILLAIA; replacements of quillaia from Chile may be difficult if it is thought, as a result of the poor crop, SENEGA is attracting less export inquiry. WAXES display a strong tone; OUBICURI is firm because of a reported shortage in Brazil. The ESSENTIAL OILS market continues active with many oils in short supply. All Spanish oils are very firm. PATCHOULI is dearer with supplies of good-quality oil difficult to obtain.

Pharmaceutical Chemicals

AMIDOPYRIN.—French material (B.P.) is offered at from 34s. to 35s. per lb.

CAFFEINE.—Makers' prices are as follows: ALKALOID, B.P., is from 36s. 6d. (1-cwt. lots) to 38s. 6d. (7-lb.) per lb.; ALKALOID, anhydrous, from 38s. to 40s.; CITRATE, B.P.C., 21s. to 23s.; SODIUM BENZOATE, B.P., 23s. to 25s.; SODIUM SALICYLATE, B.P.C., 24s. to 26s.; SODIUM IODIDE, 30s. to 32s.

CINCHONA.—At a recent auction sale, 106 crates of Tanganyika *succirubra* hybrid quills, in two piles, realised 3s. 1½d. and 3s. 0½d. per lb., while part-broken quills were sold for 2s. 8d. to 2s. 9d. per lb.; a bid for 9d. per lb. was made for chips (ninety-five bags), which were withdrawn.

COCAINE.—A new scale came into operation on January 24. Rates per oz. are: ALKALOID, CITRATE and SALICYLATE, bottles, ¼-oz., 89s.; ½-oz., 85s.; 1-oz., 82s. 6d.; 2-oz., 80s. 6d.; 4-oz., 79s. 3d.; 8-oz., 78s. 3d.; 16-oz., 75s. 3d.; tins, 25-oz., 73s. 9d. HYDROCHLORIDE, NITRATE and SULPHATE, bottles, ¼-oz., 79s.; ½-oz., 75s.; 1-oz., 72s. 6d.; 2-oz., 70s. 6d.; 4-oz., 69s. 3d.; 8-oz., 68s. 3d.; 16-oz., 75s. 3d.; tins, 25-oz., 64s.

EMETINE.—The HYDROCHLORIDE in 32-oz. lots is now 215s. per oz.; 16-oz., 217s. 6d.; 4-oz., 220s.; 1-oz., 227s. The BISMUTH IODIDE in 32-oz. lots is now 112s. per oz.; 16-oz., 113s. 6d.; 4-oz., 115s.; 1-oz., 116s. 6d. PERIODIDE is quoted at 190s. per oz. in 16-oz. lots; under 16 oz., 195s. per oz.

GUALACOLS.—Liquid is offered at prices from 14s. 6d. to 16s. 6d. per lb., and CRYSTALLAL and CARBONATE, 14s. to 15s., according to quantity.

LACTATES.—Current quotations are: **CALCIUM**, 2s. 2½d. to 2s. 6½d.; **CALCIUM SODIUM**, 3s. 5d. to 3s. 9d. per lb.; **LACTIC ACID**, B.P., is 3s. 3d. per lb. in carboys, and 3s. 4½d. to 3s. 10d. in winchesters.

MAGNESIUM CARBONATE.—Heavy, B.P., in 1-cwt. lots is quoted at 131s., and light, B.P., at 115s. 10d. per cwt.

MAGNESIUM CARBONATE.—Light, B.P., is dearer by one penny per lb. from February 1. New rates per cwt. are as follows: Not less than 1 cwt., 115s. 10d.; 5-cwt. lots, 110s. 10d.; 10-cwt., 109s. 10d.; 1-ton, 108s. 10d.; in 28-lb. parcels, delivered in the U.K.

MAGNESIUM HYDROXIDE, B.P.C.—Makers' price for 1-cwt. lots is 2s. 11d. per lb.

METHYL SALICYLATE.—From February 1 prices are advanced by threepence per lb. New rates are as follows: Winchesters, 2s. 5½d. per lb.; 56-lb. lots, in demijohns, 2s. 4d.; 1-cwt., in demijohns or carboys, 2s. 3½d.; 5-cwt., 2s. 3d.; net.

NICOTINIC ACID.—Quotations are about 40s. to 42s. per lb., as to quantity.

PANCREATIN.—Price of B.P. material is from 13s. 6d. to 16s. 6d. per lb., according to quantity.

PHENAZONE.—Prices quoted for British-made and imported material range from 22s. 6d. to 25s. per lb.

PHENOBARBITONE.—Home-trade prices are unchanged at from 35s. per lb. upwards, according to quantity.

PHENOLPHTHALEIN.—1-cwt. lots are now 7s. 7d. per lb.; 28-lb., 7s. 7d.; 14-lb., 8s.; and 7-lb., 8s. 3d. per lb.

PHENYLACETIC ACID.—A firm market. 1-cwt. lots are now quoted at 5s. per lb.; smaller, up to 5s. 9d. per lb.

PHOSPHATES.—Steady. Makers' rates per lb. are as follows:—**SODIUM**, B.P., 1 cwt., 6d.; 28 lb., 7½d. **SODIUM ACID**, B.P., crystals, 1 cwt., 1s. 9d.; 28 lb., 2s. **POTASSIUM**, granular, 4s. 2d.; powder, 4s. 5d. (for 7-lb. lots). **AMMONIUM**, B.P.C., 1 cwt., 2s. 6d.; 28 lb., 2s. 10d. **PHOSPHORIC ACID**, B.P. (concentrated), is from 1s. 2d. to 1s. 3d. in carboys and from 1s. 5d. to 1s. 9d. per lb. in winchesters.

POTASSIUM PERMANGANATE.—Home-trade rates, for B.P. grade (in 1-cwt. drums), are: 1 cwt., 1s. 7½d. per lb.; 5 cwt., 1s. 6½d.; 1 ton, 1s. 6d. Technical (in 1-cwt. drums) is 163s. per cwt.; 5 cwt., 154s. 6d. per cwt.; 1 ton, 149s. 6d. per cwt. Prices are net; carriage paid nearest railway station; drums extra and returnable.

SULPHANILAMIDE.—Prices are as follows:—1-ton lots are 7s.; 5 cwt., 7s. 3d.; 1-cwt., 7s. 6d.; 28-lb., 7s. 10d.; 14-lb., 8s.; 7-lb., 8s. 9d. per lb.

VANILLIN.—Prices have been increased by 4s. per lb. from February 1. New rates per lb. are: 5-cwt. lots, 26s.; 1-cwt., 26s. 3d.; 56-lb., 26s. 6d.; smaller quantities, 26s. 9d.

Crude Drugs

ALOES.—Cape is quoted at from 115s. to 120s. per cwt., spot; Curaçao is from 220s. to 225s. per cwt., on the spot; from origin, 215s. per cwt., c.i.f., quoted.

ANISE (STAR).—Spot quotations are at 145s. per cwt., duty paid.

ANTIMONY.—Prices for metal are: 99.6 per cent. regulus, £195; 99 per cent., £185 per ton, delivered.

ASAFFETIDA.—Quiet. Persian block on spot is offering at prices from £14 10s. to £24 per cwt., as to grade.

BISMUTH.—Basic rate for metal is 14s. 6d. per lb., in minimum 5-cwt. lots.

CALUMBA.—Natural unwashed sorts are quoted at from 75s. to 80s. per cwt., spot.

CASCARA SAGRADA.—Quotations for 1949 peel are at from 285s. per cwt., duty paid, spot; forward, 257s. 6d., c.i.f., quoted.

CASCARILLA.—Quills are being sold at 1s. 3d. and siftings at 1s. 2d. per lb., spot.

HONEY.—Quotations (per cwt.) for manufacturing honey are as follows: 1 cwt., 96s.; 5 cwt., 91s.; 10 cwt., 87s.; 20 cwt., 84s., packed in 60-lb. drums, carriage paid. Refined repacked honey is available at the following rates per cwt.: In 56-lb. tins, 100s.; 28 lb., 115s.; cases of four 7-lb., 130s., carriage paid.

IPECACUANHA.—Nicaraguan on the spot is offered at 42s. to 42s. 6d. per lb.: February-March shipment, 38s. 6d., c.i.f. Colombian, 37s. 6d. to 39s., spot; for shipment, 30s., c.i.f. Matto Grosso from origin is offered at 50s. per lb., c.i.f., and Minas at 40s., c.i.f.

KOLA NUTS.—Steady. African quarters, 6d. per lb.; halves from 2½d. to 4½d. Jamaican washed halves, 3½d. per lb.

LANOLIN.—Steady. B.P. anhydrous is £120 per ton; hydrous, £90. Superfine anhydrous is quoted at £126 per ton.

LIQUORICE.—Anatolian natural root on the spot is from 55s. per cwt.; shipment 50s., c.i.f. Syrian natural is short at from 40s. to 45s., spot. Turkish block juice is quoted at from 160s. to 230s., duty paid according to holder; Turkish stick is from 300s., duty paid, Italian stick is from 285s. to 475s. per cwt., duty paid, as to grade.

LYCOPODIUM.—Higher prices are asked. Russian triple-sifted on the spot is quoted at from 12s. 9d. to 15s. per lb., according to holder.

MACE.—West Indian blade is offered at 6s. per lb. on the spot; pickings are from 2s. to 5s., as to quality.

MASTIC.—Tears (No. 2) are offered at 13s. 6d. per lb., ex wharf.

MENTHOL.—Firm. Brazil on the spot is offered at from 85s. to 87s. 6d. per lb., duty paid; in bond, 82s.; for April-June shipment, 75s., c.i.f., is asked. Chinese is quoted at 92s. 6d. to 95s. per lb., spot, duty paid; in bond, 89s. to 90s.

MERCURY. — Spot quotations are from £18 15s. to £19 per flask; for shipment, £18 6s. 6d., c.i.f.

OPIUM.—Steady. Turkish on the spot is quoted at 7s. per unit.

ORANGE PEEL.—Thin cut Tripoli is quoted at 1s. per lb., duty paid, spot; bitter quarters are 1s. 3d. per lb., duty paid, spot, nominal.

ORRIS. — Florentine good sorts on the spot, offered at about 115s. per cwt.; for shipment, 85s., c.i.f.

PAPAIN. — East African white, on the spot, is from 15s. per lb.; Ceylon brown, from 10s. 6d. to 12s. per lb., spot.

PIMENTO.—Spot offers are at 1s. 6d. per lb.; for shipment, 168s. 6d. per cwt., i.f.

PODOPHYLLUM. — Indian (*cmodi*) for prompt shipment is quoted at 325s. per cwt., c.i.f.; spot prices are from 330s. to 35s. per cwt. American (*peltatum*) on the spot is nominally at 280s. per cwt.

QUASSIA.—Steady. Chips on the spot are quoted at from 33s. to 35s. per cwt.

QUINCE SEED. — Cape on the spot is ready at 3s. 6d. per lb.

RHATANY. — Quiet. Spot quotations are unchanged at 9d. per lb.

RHUBARB. — Nominal on the spot: to me forward, 8s. 3d. to 8s. 6d. per lb., landed, duty paid; for shipment, 7s. 3d. 7s. 6d., c.i.f.

SARSAPARILLA.—Jamaican native red, on the spot, is offered at 2s. to 2s. 3d. per lb.; forward, 1s. 10d., c.i.f. Jamaican grey, 3s. 6d., spot.

SEEDS.—The ANISE market has been quiet. Turkish is quoted at 155s. per cwt., bond, and 165s. per cwt., duty paid. Egyptian is quoted at about 150s. per cwt., bond, London. CARAWAY.—Dutch is changed at 125s. per cwt., duty paid, spot London. CELERY.—Indian is nominal

1s. 9d. per lb., spot. French, on spot, is eased at 250s. per cwt., duty paid. ORRIS.—Spot quotations of Morocco are unchanged although the shipment price is now 77s. 6d. per cwt., c.i.f. Argentine, whole seed, has practically all been cleared

spot, 75s. per cwt., duty paid, quoted nominally. CUMIN.—Market unchanged on spot. Morocco is 157s. 6d. per cwt., in bond, and 167s. 6d. per cwt., duty paid, spot London; for shipment, 155s. per cwt., f., London, quoted. Indian is offering

155s. per cwt., spot London or Liverpool. A small quantity of Cyprus is offered, spot London, at 190s. per cwt. DILL. Indian is 62s. 6d. per cwt., spot London; for shipment, 57s. 6d. per cwt., c.i.f.

NNEL.—Indian is quiet and unchanged 75s. per cwt., spot London. FENUGREEK. Market remains firm. Morocco, spot London, is 57s. per cwt., duty paid, and ex store Liverpool, Indian, spot London, is 62s. 6d. per cwt.

SENEGAL.—Continues quiet. Spot quotations are at 11s. 6d. per lb.; for shipment, 11s. 6d., c.i.f.

SENNA.—Tinnevely leaves, spot, No. 1, from 9½d. to 11d. per lb.; No. 2, 7½d. to 8d.; No. 3, 6½d. per lb.; Tinnevely pods, selected, nominal; ordinary hand-picked, 9d. to 1s.; manufacturing, 5½d. to 6d. Alexandrian pods, hand picked, spot, from 4s. 9d. to 5s. 9d. per lb., nominal; medium grades are offered at from 2s. 6d. to 3s. per lb., manufacturing, 8d.

SQUILL.—Italian is quoted at 57s. per cwt., spot; for shipment, 45s. to 50s., c.i.f.

STYRAX.—Crude is quoted at from 7s. to 7s. 3d. per lb., spot, duty paid.

VALERIAN.—Belgian natural on spot is quoted at from 205s. to 220s. per cwt.

WITCH-HAZEL LEAVES. — Spot supplies are offered at 3s. 9d. per lb., duty paid.

Essential and Expressed Oils

BAY.—West Indian on spot is quoted at from 6s. 6d. to 7s. 6d. per lb.

BERGAMOT.—Supplies are available on the spot at from 32s. to 33s. per lb.

BOIS DE ROSE.—Quotations are from 24s. to 27s. 6d. per lb.; forward, 22s. 6d., c.i.f.

CAMPHOR.—Quiet. White oil on spot is quoted at from 2s. 3d. to 2s. 5d. per lb., duty paid; brown oil, from 1s. 7d. per lb., spot, duty paid.

LA VENDER.—French, 38-40 per cent., on spot is offered at from 21s. to 24s. per lb.; 40-42 per cent., 22s. to 25s. Spanish spike is 9s. to 9s. 6d. per lb., spot.

LEMON.—Sicilian, to come forward, is quoted at from 25s. to 27s. 6d., landed.

LEMONGRASS.—Spot quotations are from 15s. 6d. to 16s. per lb.; shipment, 15s. 3d. per lb., c.i.f.

LIME.—West Indian on spot is offered at from 49s. to 51s. per lb.

ROSEMARY.—Spanish on spot is offered at 7s. to 8s. per lb., as to grade; Dalmatian, 5s. 6d.

SAGE.—Dalmatian is offered at prices from 12s. 6d. per lb., spot.

SANDALWOOD. — Mysore oil on spot, from 70s. to 77s. 6d. per lb.; English-distilled is about 75s. per lb.

SASSAFRAS.—Brazil on spot is quoted at from 5s. to 5s. 6d. per lb.

THYME.—Steady. Red oil (40-42 per cent. phenols), 10s. 6d. to 12s. 6d. per lb.; white oil, 17s. to 18s. 6d. per lb., spot.

TI-TREE. — Quotations are from 6s. 6d. to 8s. per lb., according to quantity.

VALERIAN.—English-distilled oil is quoted at 75s. per oz.

VETIVERT.—Bourbon on spot is quoted at around 90s. to 95s. per lb., as to grade.

YLANG YLANG. — Bourbon on the spot is quoted at from 65s. to 70s. per lb.

COMING EVENTS

Monday, February 6

NOTTINGHAM BRANCH, PHARMACEUTICAL SOCIETY, lecture theatre, Medico-Chirurgical Society, 64 St. James' Street, Nottingham, at 7.30 p.m. Mr. R. C. Davey on "Colour Photography."

SOUTHGATE AND WOOD GREEN DIVISION, NORTH LONDON PHARMACEUTICAL ASSOCIATION, Windsor Café, 398 Green Lanes, Palmers Green, N.13, at 7.30 p.m. Mr. A. R. Cross, M.P.S., on "Pharmacy in South Africa."

WEST KENT BRANCH, PHARMACEUTICAL SOCIETY, Central Library, Beckenham, at 8 p.m. Members invited to give their "Grouses and Useful Hints."

Tuesday, February 7

BOLTON PHARMACEUTICAL ASSOCIATION, Reform Club, Bowkers Row, Bolton, at 7.30 p.m. Mr. F. W. Adams, B.Sc., Ph.C. (secretary, Pharmaceutical Society) on "All Up-to-date Matters of the Society."

BURNLEY BRANCH, PHARMACEUTICAL SOCIETY, Yorkshire Hotel, Burnley. Annual dinner. Ticket 15s.

SOUTH-EAST METROPOLITAN BRANCH, PHARMACEUTICAL SOCIETY, and SOUTH-EAST LONDON CHEMISTS' ASSOCIATION, The Grove Tavern, 26 Camberwell Grove, S.E.5, at 7.30 p.m. Mr. H. W. Toms on "The Economics of N.H.S. Dispensing."

Wednesday, February 8

GLASGOW BRANCH, PHARMACEUTICAL SOCIETY, Hall of the Institute of Accountants and Actuaries, 220 St. Vincent Street, Glasgow, at 7.30 p.m. Film show presented by Mr. W. J. Merrick.

ROMFORD BRANCH, PHARMACEUTICAL SOCIETY, The Unicorn, Gidea Park, at 7.30 p.m. Miss W. Fosh on "Colour Photography in Practice."

NATIONAL ASSOCIATION OF WOMEN PHARMACISTS, Lysbeth Hall, Soho Square, London, W.1, at 6.30 p.m. Annual dinner and dance.

Thursday, February 9

BRISTOL BRANCH, PHARMACEUTICAL SOCIETY, Marlborough Room, Grand Hotel, Broad Street, at 7.15 p.m. Address by Dr. H. Davis (chief pharmacist, Ministry of Health).

LEEDS BRANCH, PHARMACEUTICAL SOCIETY, Metropole Hotel, Leeds, at 7.45 p.m. Mr. R. W. Gillham, Ph.C., on "Leaves from an Analyst's Notebook," Mr. F. R. Rymer, Ph.C., on "Counter First-aid," and Mr. E. C. Winder, M.P.S., on "From the R.E.s to the R.A.M.C."

MANCHESTER PHARMACEUTICAL ASSOCIATION, Council Chamber, Houldsworth Hall, Deansgate, at 7.45 p.m. Mr. A. F. Plowright, Ph.C. (assistant-secretary, Pharmaceutical Society) on "Pharmaceutical Education with Special Reference to Recent Changes."

SHEFFIELD AND DONCASTER BRANCHES, PHARMACEUTICAL SOCIETY, Danum Hotel, Doncaster, at 3 p.m. Coach for Sheffield members leaves City Hall, Sheffield, at 1.50 p.m. Members to advise secretary by noon, February 6. Joint meeting.

THAMES VALLEY PHARMACISTS' ASSOCIATION, Kingston Hotel, Kingston-on-Thames, at 7.45 p.m. Mr. Ernest Skues, M.P.S., on "Retrospect and Prospect."

ROYAL INSTITUTE OF CHEMISTRY, Acton Technical College, High Street, London, W.3, at 7.30 p.m. Dr. E. Lester Smith on "Vitamin B₁₂."

Friday, February 10

SOCIETY OF CHEMICAL INDUSTRY, Fine Chemicals Group, London School of Hygiene and Tropical

Medicine, Keppel Street, W.C.1, at 7 p.m. M. J. Davidson Pratt on "The Economics of Fine Chemical Industry."

BIRMINGHAM SECTION, CHEMICAL SOCIETY, M. chemical lecture theatre, the university, Edgbaston, at 4.30 p.m. Sir Ian Heilbron on "Five Years of Organic Chemistry."

TRADE MARKS

(From the "Trade Marks Journal," January

For detergents (3).—"TREX"; by J. Bibby Sons, Ltd., Liverpool; 670,536.

For all goods, excluding medicated confectionery, infants', invalids' and dietetic foods (5).—"RACAROL"; by Deodor-X Co. of England, Ltd., Ellesmere Port; 676,914.

For pharmaceutical preparations (5).—"GLERGY"; by Carter Bros., Shipley; 678,707. "FOTE" and "INFANSPRIN"; by Hough, Hosea & Co., Ltd., Manchester; 680,200 and 684,500. "ASTHMAPHYLLON"; by Camden Chemical Co. Ltd., London, W.C.1; 681,297. "TRAVISYL"; Bayer Products, Ltd., London, W.C.2; 681,600. "ORACILLIN"; by Clinical Products, Ltd., Richmond; 681,671. "STERIDOL"; by H. R. Nalco Ltd., London, W.C.2; 684,058.

For iodised oil for veterinary purposes (5).—"VETIOL"; by Menley & James, Ltd., London S.E.5; 682,497.

For thermometers, etc. (9).—"MULLARD"; Mullard Electronic Products, Ltd., London W.C.2; B669,337.

For scientific, photographic and optical apparatus and instruments (9).—"STROBOLUX"; by General Radio Co., Cambridge; 682,815.

For thermometers and thermostats (9).—"AMATIC"; by Aga Heat, Ltd., London, W.6; 683,115.

For surgical, medical and veterinary instruments and apparatus (10).—"SUBAVAC"; by William Freeman & Co., Ltd., Barnsley; 683,797.

For non-medicated toilet paper (16).—"VETIA"; by Brady, Walters & Co., Ltd., London N.19; 682,969. "INTEREST"; by Henry Bayle Pritchard, Carlisle; 683,224.

For sprays for perfume and for toilet preparations (21).—"SCENETTE"; by Walsall Pressings Co., Ltd., Walsall; 683,204.

(From the "Trade Marks Journal," January 20

For non-medicated toilet preparations (3).—"MAKIE STUART" and woman's profile; by M. Stuart, Ltd., London, E.C.3; 665,917. "SCOTTAIR"; by Campana Corp., Batavia, U.S. 674,683. "DANA" in distinctive lettering; Financiera de Perfumeria, S.A., Panama; B676,978. "FONTAINE" and fountain device; by Fontaine (Perfumes), Ltd., Castle Bromwich; 677,100. "RENCONTRE"; by Coty (England), Ltd., London, W.1; 682,781. "NIGHTFALL"; by R. Demuth Ltd., London, N.W.6; 683,518.

For perfumes and toilet water (3).—"EAU JEUNESSE"; by Société Anonyme Parfums Marquise Rochas, Paris; 671,593.

For tooth-powders (3).—"AMM-I-DENT"; Stafford-Miller, Ltd., Welwyn Garden City; 676,682.

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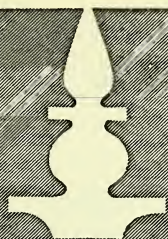
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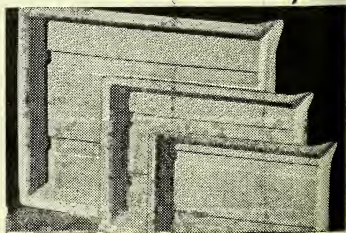
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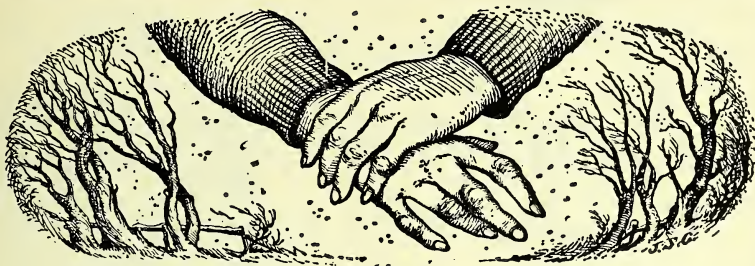
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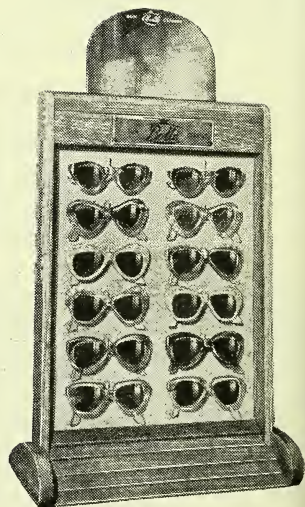
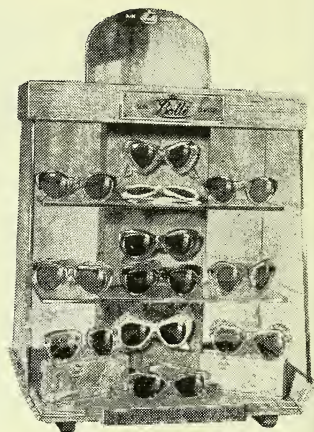
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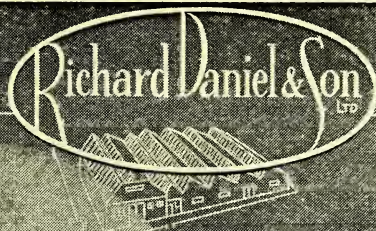
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Small size:

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3 doz. lots carriage paid.



REGD. TRADE MARK

CA1 36

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FOR PROPHYLAXIS AND TREATMENT OF THE COMMON
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Quinine possesses in addition to antipyretic properties a central analgesic action which blunts the pain in muscles and joints associated with influenzal infection. "It is important to ensure a reasonable daily intake of not less than about 50 mg. of vitamin C . . . and that it may be well to ensure saturation in all feverish patients."

Lancet 1944, *ii*, 118.

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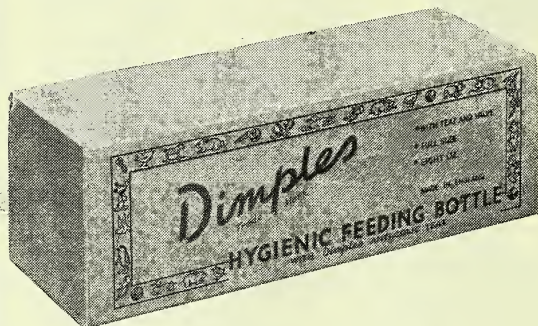
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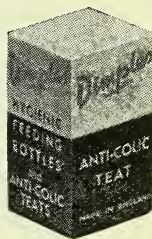
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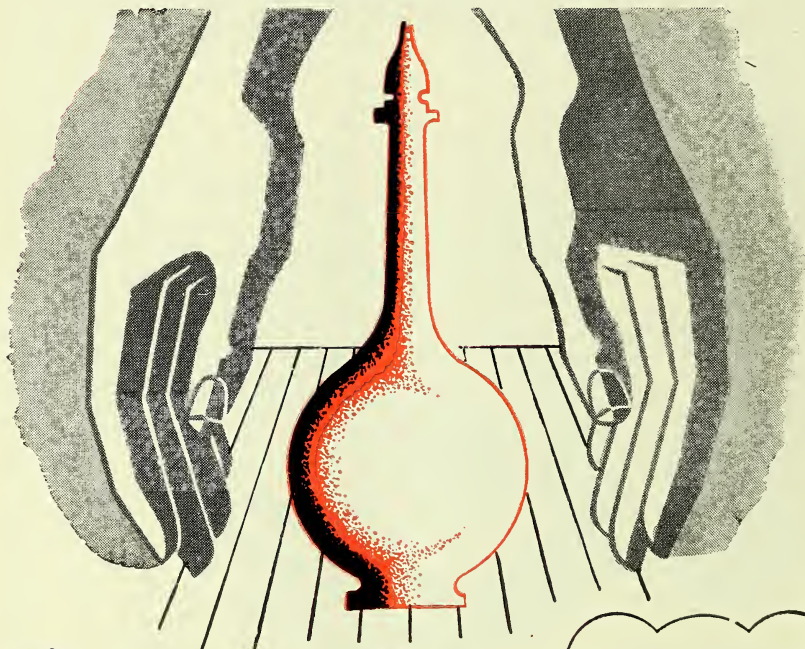
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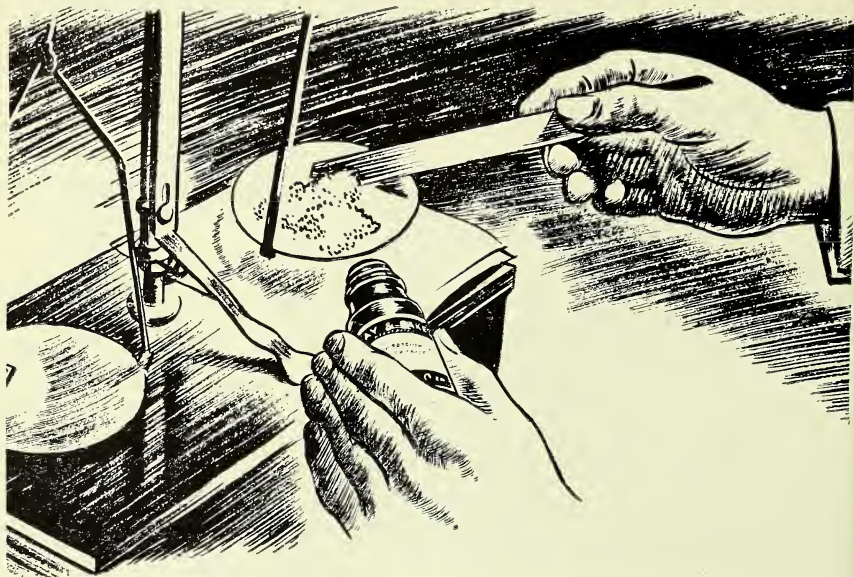
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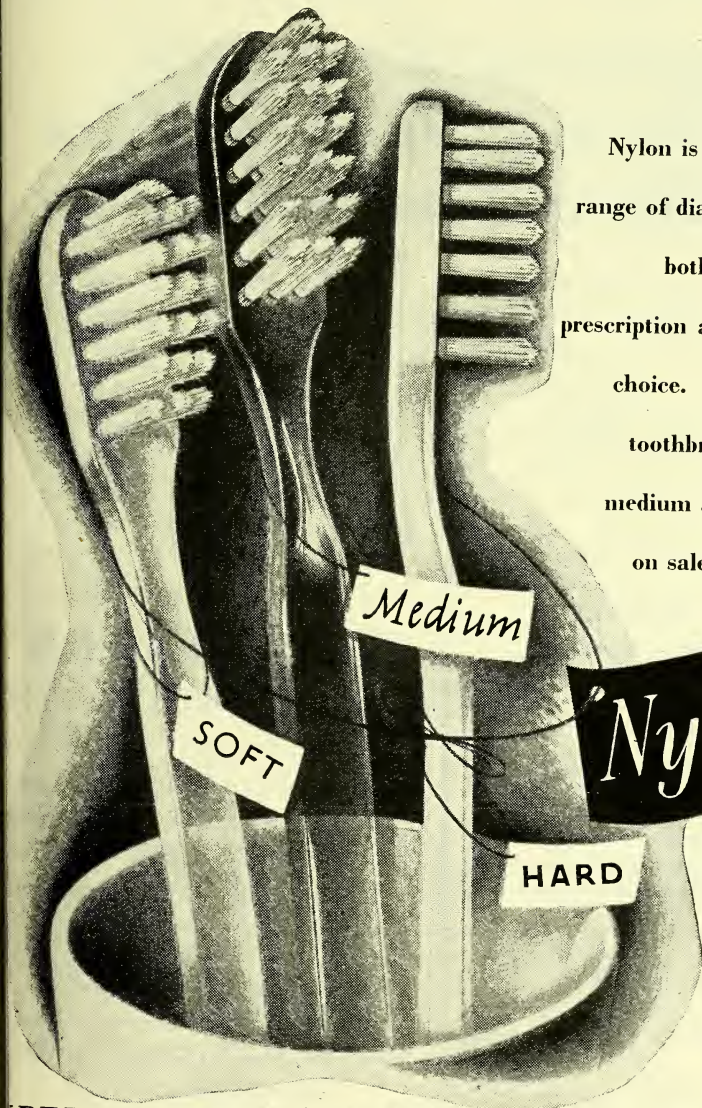
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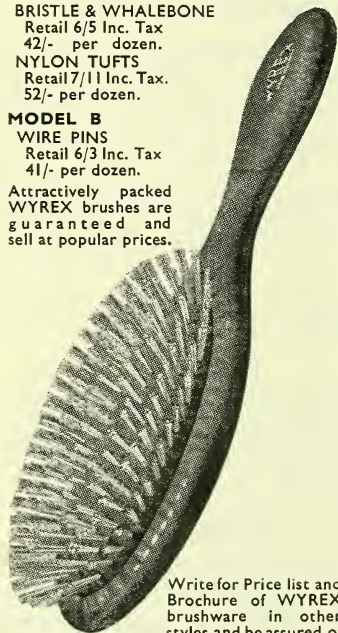
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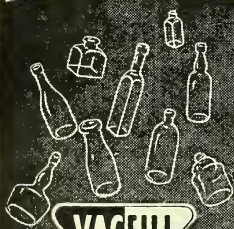


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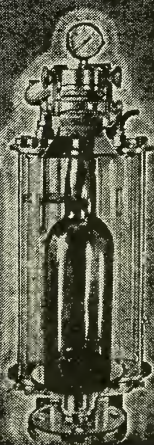
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CLEANING

PLASTIC

DENTURES

3/- per bottle inc. tax. 33½ discount. Showcards supplied

**KRAUTH CHEMICALS, 49a HIGH STREET
Walton-on-Thames, Surrey**

W.1



*An
attractive*

TOILET ROLL
*OF EXCEPTIONAL
QUALITY*

**Established Wholesalers
only supplied**

HUNT & COLLEYS LIMITED
HUCKNALL RD., NOTTINGHAM. Tel. 61088-9

G. O. WOODWARD & CO. LTD.

MANUFACTURING CHEMISTS

Manufacturers of
COMPRESSED MEDICINAL TABLETS
SPECIALISTS IN THE PREPARATION OF
TABLETS TO CUSTOMERS OWN FORMULÆ

**MODERN
PLANT**



**PROMPT
DELIVERY**

QUALITY AND ACCURACY IS GUARANTEED

All B.P., B.P.C. & N.F. tablets stocked

Home and Export Enquiries Invited

G.O. WOODWARD & CO. LTD.

144-146 LARKHALL LANE, CLAPHAM, LONDON, S.W.4. Phone: Macculey 4375



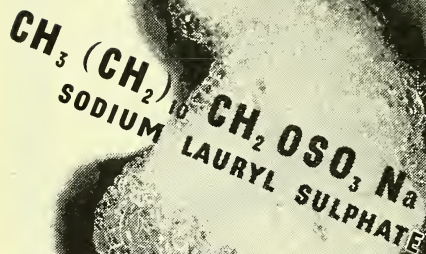
The **BEATSON MEDICAL**

A bottle of quality. The retention of the vial lip for easy pouring is combined with all the advantages of modern design, including the elimination of internal sharp corners allowing rapid dispersal of sediment.

★ *Plain or Graduated
Cork Mouth or Screw Capped*

BEATSON, CLARK & CO. LTD

MANUFACTURERS OF CHEMICAL AND MEDICAL GLASS
ROTHERHAM • Established 1751 • YORKS.



EMPICOL L.Z. POWDER

Chemical Nature Sodium Lauryl Sulphate.

Active Matter and Composition 90% Sodium Alkyl Sulphate. Free Fatty Alcohol — not more than 2%. Water not more than 3%. Inorganic Salts — not more than 8%.

Appearance Spray dried white powder.

Packing Waterproof paper-lined hessian bags or fibre board drums.

Bulk Density Between 0.1 and 0.3 as required.

Properties and Uses The purest Sodium Lauryl Sulphate available. Used as a foaming agent and detergent for cosmetics and toilet articles, particularly for Toothpastes, where it is odourless and tasteless. Well within the B.P. 1948 Specification for Sodii et Laurylis Sulphas.

Many industrial users who require a high purity Wetting Agent, Emulsifier, etc., are finding Empicol L.Z. Powder economical and effective for specialised purposes.

Marchon

OF WHITEHAVEN

PRODUCTS LTD



HEAD OFFICE: WHITEHAVEN, CUMBERLAND

Telephone: Whitehaven 650/652 and 797 (4 lines)

Telegrams: Marchonpro, Whitehaven

Southern Sales Office:

36 Southampton St., Strand, LONDON, W.C.2

Telephone: Temple Bar 3134

Telegrams: Marchonpro, Rand, London

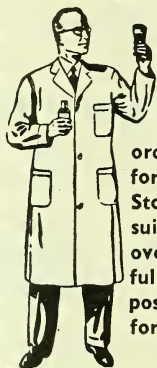
Lancashire Sales Office: 1 Booth St., MANCHESTER 2

Telephone: Blackfriars 7778

Telegrams: Marchonpro, Manchester

n.d.h.

GARDINER'S FOR COATS



Due to the difficulty in obtaining supplies of white coats, white jackets, etc., it is not possible to accept orders for such goods for the time being. Stocks of blue boiler suits and bib and brace overalls are fairly plentiful and we are in a position to accept orders for same from stock.

Gardiner & CO. (The Scotch House) Ltd,

1, 3 and 5 COMMERCIAL ROAD, LONDON, E.1
(opposite Aldgate East Station. Phone: B18 6751 (3 lines))

Branches: DEPTFORD, S.E.8;

WOOLWICH, S.E.18; CLAPHAM, S.W.11.

The PEARSON *Liquid* FILLING MACHINE

- RAPID
- ACCURATE
- NON-DRIP
- COMPACT



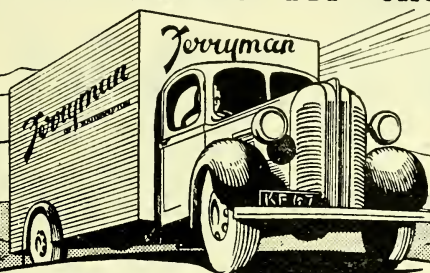
The "PEARSON" Liquid Filling Machine can be operated by unskilled labour. It is easily adjusted for different sizes of bottles, etc., almost any of which can be rapidly filled with fluid without spill or drip.

The machine can be quickly cleaned and sterilized.

S.W. PEARSON LTD.

PECKLETON COMMON · N.R. EARL SHILTON · LEICESTER
TEL. DESFORD 381/2 GRAMS · RENCOL

The SERVICE for the



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Ferryman

OF SOUTHAMPTON

Manufacturers, Distributors, and Exporters
Drugs, Chemicals, Proprietaries, Ethicals and Druggists Sundries

Cables and Telegrams
Ferryman Southampton
Code "Bentleys"

HERBERT FERRYMAN LTD.

Cobden Bridge, Southampton, England

Telephones
75641 (5 lines)

BURNSIDE'S EUCALYPTUS OILS

Distilled in Australia by the largest distillers and refiners of Eucalyptus Oils in the world.—W. K. BURNSIDE, PTY., LTD., MELBOURNE, AUSTRALIA

80/85% B.P.
Oil Euc. Dives 40/45%
Oil Euc. Citriodora

70/75% B.P.
Piperitone 90/95%
Oil Euc. Phellandra

UNIFORMITY OF QUALITY Phellandrene
CONSISTENCY OF ODOUR

Agents for U.K.: **WILSON & MANSFIELD, LTD., 15 Philpot LANE, LONDON, E.C.3**

Phone: MANSION HOUSE 9264-5-6

(WHOLESALE ONLY)

Grams: WYFIELD, LONDON

Ask For

W. MELLOR & CO.
(Mossley Ltd.)

SANITARY TOWELS



UNA MILL MOSSLEY
LANCS.

. . . the all Wool Towel

more good reasons for displaying TAMPAX

More women

are learning how
comfortable

Tampax is—how
convenient, how dainty,
how discreet.



More women are treasuring
the freedom it brings,
the peace of mind,
the release
from old-time
embarrassments.



Yes, more and more
it's profit-wise
to stock and
display Tampax...

*The demand is increasing
—make sure it's met at
your counter!*

TAMPAX LIMITED

SALES OFFICE: 110 JERMYN STREET, LONDON, S.W.1

*At the sink
or in the swim..*



the PUCK
Undercaps give
perfect protection.
They sell all the year
through as a dust-cap, bath-cap
or swim-cap. Order Now—they're always
popular... never long before you need more



Supplied in outers containing
4 dozen assorted (red, yellow,
pale blue and white). Each
cap packed in window car-
ton to show colour.

Retail
Price

1/6
INC. TAX

Puck BATH CAP
SWIM CAP
DUST CAP

GROVEWELL LTD.
656 Forest Road, Walthamstow, London, E.11
Only Wholesalers Supplied

**6,000,000
A MONTH**

EVERY month upwards of six
million mothers and mothers-to-be are
getting to know more and more about the
advantages of Nappi-wite. A scientifically
planned advertising campaign through the
medium of the women's and provincial press
is telling them why Nappi-wite has become
so popular. This nation-wide coverage with
its specialised readership brings home to
women the importance of Nappi-wite to the
welfare of his majesty the baby.

Everywhere the demand for Nappi-wite is
growing—ensure that you have sufficient
stocks to meet it. Your usual Wholesaler
can supply you by return.

NAPPI-WITE

The Non-Bleach Nappy Wash

NAPPI-WITE LTD., 17 Conduit Street, W.1

Readership of
LIFEGUARD
ADVERTISEMENTS
totals over
900,000,000

★ *Top Advertiser in 1949 — Still bigger now*



- THEY SELL ON NAME
- THEY SELL ON SIGHT
- THEY SELL ON & ON

LIFEGUARD LEADS

Regd. Trade Mark

to healthier profits for you

LIFEGUARD PRODUCTS LTD., 21 WATLING STREET, E.C.4



AGENTS
REQUIRED
IN
CERTAIN
DISTRICTS

The **LARGER** and improved
TOILET ROLL
RETAIL PRICE

6

INCLUDING PURCHASE TAX
(IN ENGLAND & WALES ONLY)

ALL ENQUIRIES TO: KALIS PAPER CO.

341 COMMERCIAL RD., LONDON, E.1 • Tel.: STEpney Green 3722

NORVEX TOWELS

*We have pleasure in
announcing our latest
production:—*

“NORVEX POPULAR”

An extremely absorbent Rayon
Towel retailing at the following
prices:—

- No. 0 1/9
- No. 1 2/-
- No. 2 2/5
- No. 3 3/-

*Silky Soft Knitted Covers with
Stitched Loops*

SEND YOUR ORDERS NOW TO —

CROSSKILL'S OF NORWICH

ASPIRINS

HOME AND EXPORT

7½ & 5 grain

Packed 10's to 1,000's

• **HARRINGTONS** •

London Office: 2 BERRIDGE Grn., EDGWARE, LONDON

MOSANS PESSARIES

15/- per doz. boxes
any wholesaler

INDIA'S retail, wholesale
and import drug
trade (also Paki-
stan, Ceylon) is blanket covered
by country's 12 year old journal,
CHEMIST & DRUGSTORE NEWS,
Official Organ of All-India and 12
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London Office: D. S. Cooper, 2-3 Norfolk St.,
Strand, London, W.C.2 Temple Bar 4687

ASPIRIN is an acidic substance, sparingly soluble

DISPRIN is neutral, stable, soluble – and palatable

The reasons for preferring calcium aspirin to aspirin lie chiefly in the fact that it is a neutral, soluble and bland compound, whereas aspirin is acidic, sparingly soluble and may act as a gastric irritant. But calcium aspirin has a defect of its own – chemical instability; and in consequence attempts to manufacture it in the form of a stable tablet have hitherto met with little success. These difficulties have now been overcome. 'Disprin,' a stable tablet preparation, readily dissolves to yield a substantially neutral and palatable solution of calcium aspirin that can be prescribed in all conditions in which acetylsalicylate administration is indicated.



On prescription Disprin is free of Purchase Tax
Clinical sample and literature supplied on application

RECKITT & COLMAN LTD., HULL AND LONDON. (PHARMACEUTICAL DEPT., HULL)

FOR

PATENTS

DRESSINGS

PILLS & TABLETS

DANGEROUS DRUGS

DRUGS & GALENICALS

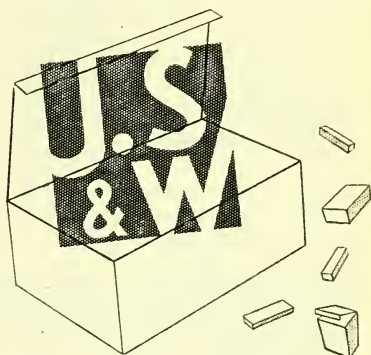
ETHICAL PROPRIETARIES

SMITH & HILL

(Chemists) Ltd.

SIDNEY ST., SHEFFIELD, 1

Phone: 24321



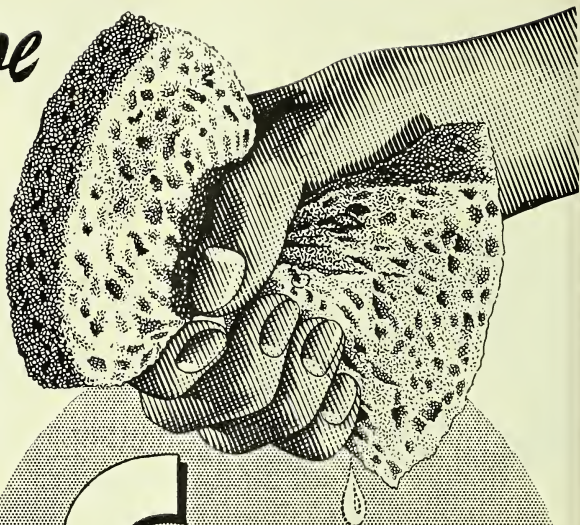
Letterpress and litho
cartons. Folding and
rigid boxes. Packings for
special purposes.

*The Packaging
Specialists*

1842-1950

JOHNS, SON & WATTS LTD.
2-4 EPWORTH ST., LONDON, E.C.2
Phone. MONSIEUR 7408
(three lines)

*Increase
your
Toilet
Sponge
Sales
with-*



Spontex
SPONGES

CONTAIN NO RUBBER

**A NEW . . .
A Wider Market**

You can do much bigger business in toilet sponges when you offer Spontex. These high quality sponges, in attractive colours at attractive prices, are being bought by people who have not before been sponge users. They offer you completely new sales opportunities. Order Spontex Sponges in assorted colours to take advantage of their unique display possibilities. Enquire through your usual supplier or in case of difficulty write to the address below. (Showcard on request).

OVAL TOILET SPONGE (No. 33)
In four delightful colours: natural yellow, blue, green and pink. Retailing at 2/9d. including purchase tax.

SPONTEX BATH SPONGE (No. 44)
In the same colours. Retail price 3/8d. including P.T.

SPONTEX BABY SPONGE
Extra fine, extra soft. In natural yellow, blue and pink. Beautifully wrapped. Retail price 2/5½d. including P.T.

SPONTEX COSMETIC SPONGE
Retail price 7½d. including P.T.

Made in Great Britain by:—

SPONCEL LTD., WOLDHAM ROAD, BROMLEY, KENT. Tel: RAVensbourne 2641

NATIONAL ADVERTISING

(PLUS BONUS OFFER)

BRINGS EXTRA PROFIT TO

ANZORA
TRADE MARK

STOCKISTS

NUZORA—the brilliant new addition to the Anzora range—means business! Novel advertisements are now appearing in a nation-wide campaign to launch this popular hairdressing discovery. At the same time, the attractive Bonus Offer, detailed below, is available to all Stockists. It's going to be a big Anzora year for everyone!

*Make a Brilliant
impression with*

NON-gumming NON-flaking

NUZORA

The most brilliant hairdressing
Don't forget there's also

ANZORA Cream and VIOLA

THE COMPLETE RANGE OF ANZORA BEST SELLERS

- | | |
|------------------------------------------------|-----------------------------------------------------------|
| ● ANZORA
Cream and Viola | ● ANZORA
After-Shave Lotion |
| ● ANZORA
Brilliantine
Violet and Jasmine | ● NUZORA
Hair Dressing
Contains no gum
or starch |

FASSETT & JOHNSON LTD

86, Clerkenwell Road, London, E.C.1

BONUS OFFER!
In addition to

5%

discount on orders of 3 doz. mixed
parcel, you can enjoy a further 5%
discount for the following order.

- I DOZ. Anzora, small
- I DOZ. Viola, small
- I DOZ. Nuzora
- I DOZ. After-Shave Lotion
- I DOZ. Brilliantine, Violet
- I DOZ. Brilliantine, Jasmine



FOR EVERY MONTH OF THE YEAR

"ZEMS" HERBAL LICORICE TABLETS



THE BEST MEDICATED TABLETS FOR
COUGHS, COLDS, ASTHMA, BRONCHITIS, ETC.

Supplies may be obtained



from C.F. Wholesale Houses

ZEMS LTD

718-724 Seven Sisters Road, London, N.15

Telephone: STAMFORD HILL 6658-9

When advice on

Contraception

is necessary or desirable !

It is always wise to prescribe

***RENDELLS PRODUCTS**

Based on clinical and biological experience, and conforming to the same standard of spermicidal efficacy as required by the Family Planning Association, Rendells Products can always be recommended with full confidence. The complete range of chemical contraceptives now available gives a wide scope in selecting the best method suited to individual requirements.

RENDELLS PESSARIES

RENDELL GELS

RENDELL - CREAM

RENDELL - FOAM

Our latest chemists' advertising material is available upon request.

W. J. RENDELL LIMITED

Manufacturing Chemists

161/165 ROSEBERY AVENUE, LONDON, E.C.1

Also at: SYDNEY (AUS.), WELLINGTON (N.Z.), RIO DE JANEIRO, PARIS

News from DALMAS of Leicester

New waterproof protection

A NEW-TYPE
ADHESIVE
STRAPPING**Waterproof . . . has 101
First-Aid uses**

DALMAS STRAPPING, a new *waterproof* plastic adhesive with 101 first-aid and other uses, is now in widespread demand everywhere. Because of this, supplies have been greatly increased.



These spools are handy

Dalmas Strapping can be cut to any size, gives 100% protection against water, dirt, grease and acid. That's why it's specially suitable for

tiny cuts, sore places, torn finger nails, etc. In particular, it is ideal wherever the fixing of a bandage would be awkward. Dalmas Strapping stretches *all* ways, so edges stick tight while allowing free movement of joints and muscles. Attractive counter sell-outs contain twelve 1/- spools, each 1 inch by 1 yard, price 8/-, or 24 spools, price 16/-. Also in 3-yard lengths, and in 2 inch and 3 inch widths.

DALMAS HEEL DRESSINGS. A new *waterproof* dressing that is specially designed for sore and blistered heels. Handy boxes, price 1/- retail.

DALMAS FINGER-TIP DRESSINGS. A new *waterproof* adhesive protection for cracked, cut or sore finger-tips. Handy boxes, 8/- per dozen, to retail at 1/- each.

DALMAS BOIL PLASTERS. A new *waterproof* protective dressing for boils. Skin-coloured, hardly shows. Handy boxes, price 10d. retail, including tax.

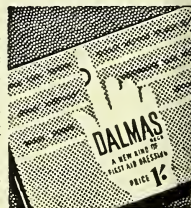
for cuts

*Heavy demand for
Dalmas First-Aid
Dressings*

TO meet the nation-wide demand, we have further increased supplies of Dalmas the *waterproof* plastic dressing that offers a totally new method of protecting cuts and minor wounds.

Dalmas gives 100% protection against water, dirt, grease and acid. So you need only cover the affected place and . . . further trouble! You can actually walk with it on.

Dalmas stretches *all* ways (not just one way). That's why edges stick tight, cannot fray, cannot catch in clothes. What's more, Dalmas lessens infection risk, promotes safe and easy healing.



Display this box on your counter

Dalmas is skin-coloured, hardly shows. In attractive blue-and-white counter sell-outs, containing three dozen 1/- boxes, price 8/- per dozen. Special quantity discount. **PLACE YOUR ORDER NOW!**

A. de St. Dalmas & Co. Ltd**LEICESTER** (Phone: Leicester 65261)**London Depot:** 140-142 St. John St., E.
(Clerkenwell 3399)**Leeds Depot:** 14 Neville Street
(Leeds 29764)**Scottish Agents:****Robert Telford,** 29 Waterloo St., Glasgow.
(Central 2716)

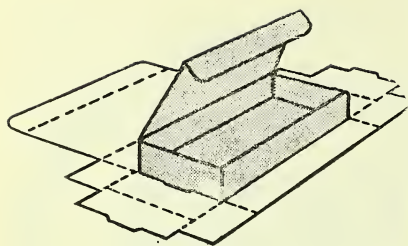
How to obtain BEST TERMS on Silvikrin Products

BEST TERMS give you an extra discount of $12\frac{1}{2}\%$ on orders of 70/- or over at list prices below. **BEST TERMS** are now obtainable **ONLY** from Prichard & Constance (Manufacturing) Limited. **ORDERS** for less than 70/- nett at list prices below should be placed with your usual wholesaler.

SPECIAL NOTE. As from 9th January, 1950, the list price of Silvikrin Lotion (small) and Silvikrin Lotion with Oil (small) was reduced from 13/6 to 13/- per dozen as shown below. The consumer price will remain at 2/7½ until 1st March, 1950, when it will be reduced to 2/6½ tax inclusive.

Silvikrin	LIST PRICES	Trade Price	Purchase Tax	Consumer price (inc. tax)
		PER DOZEN	PER DOZEN	EACH
Pure Silvikrin	54/-	54/-	10/6
Lotion, small (see <i>SPECIAL NOTE</i> above)	13/-	13/-	2/7½ { 2/6½ from 1/3/50
Lotion, large	24/9	24/9	4/10 { 2/6½ from 1/3/50
Lotion with Oil, small (see <i>SPECIAL NOTE</i> above)	13/-	13/-	2/7½ { 2/6½ from 1/3/50
Lotion with Oil, large	24/9	24/9	4/10
Soapless Powder Shampoo	3/7	1/2½	6d
Lustrefoam Liquid Shampoo	7/10	2/7	1/1
Silvifix Hair Cream	18/-	18/-	3/6
Kemt Complete (with Spray)	45/-	45/-	8/9
Kemt Refill	22/6	22/6	4/4½

★ Prichard & Constance (Mfg.) Ltd., North Circular Road, London, NW10 Tel: ELGar 8095



The BOLEFOLDIA PATENT ENDS carton is ideal for the smaller shallow pack.

Economical in use of material and in manufacture (no glueing or stitching), this style is speedily assembled and makes up into a particularly neat and rigid pack.

We invite your enquiries.

BOLEFOLDIA LTD.
CARTON MANUFACTURERS
BOURNBROOK, BIRMINGHAM



**CORKS,
STOPPERS,
ETC.**

Telephone CAMPERDOWN STREET Royal 4922
LONDON, E.1

WILES VITAMIN dog food

IS FULL OF GOODNESS

and it sells on sight

This quality dog food contains concentrated meat, liver and fish. It is packed in handy airtight tins, attractively labelled in red and black, and specially designed for easy stacking and display.

Bright attractive showcards and window bills are now available.

Order your supplies of Wiles Vitamin dog food through your usual Wholesaler.



Made exclusive
by WILES
WOODMANSE
E. YORKS.

RETAIL PRICE

The finest dog food in the world

BE READY

FOR THIS SEASON'S INCREASED EGG PRODUCTION



With extra poultry foods available, more of your customers will be preserving eggs this season. This means more requests for Goodall's Waterglass. Be sure your stocks are sufficient to meet the increased demand. Goodall's Waterglass gives a clear, clean fluid. Packed in attractive leakproof tins and containers of various sizes.

Write for details and prices.

Goodall's WATERGLASS

EGG PRESERVATIVE

GOODALL, BACKHOUSE & CO., LTD.
SOVEREIGN STREET, LEEDS

STORAGE MADE SIMPLE

"SECO"**STEEL STORAGE
EQUIPMENT****FOR FACTORIES AND STORES**

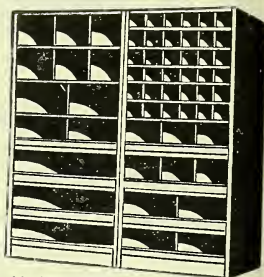
SECO Steel Equipment is suitable for all storage requirements, giving maximum storage capacity in the minimum floor space. A SECO Standard Unit is available to suit your every storage need. All units can be easily assembled with a screwdriver and spanner by unskilled labour on site. We also undertake the production and installation of storage equipment to customers' own specifications. The illustrations show a few standard units from the SECO Range. Send for List C.D.

The STEEL EQUIPMENT CO., LTD

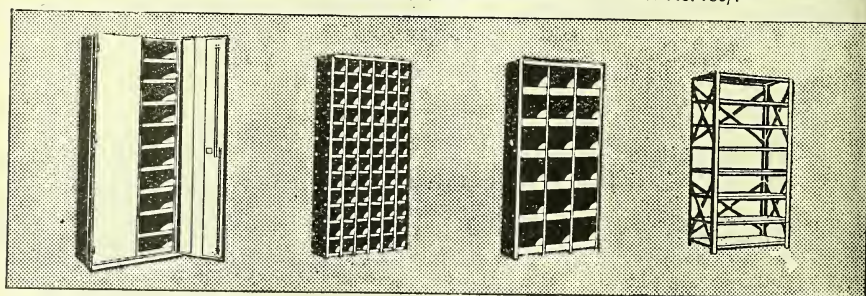
Greets Green, West Bromwich, Staffs.

Phone: TIPTON 1137-8-9

Grams: Equipit, West Bromwich



UNIT No. 950/1



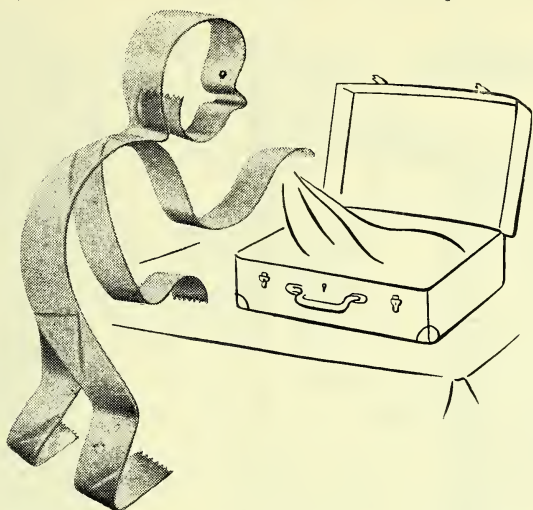
L.G.B.

RATS**RATOIDS****destroy Rats and Mice****painlessly without trace or odour****Harmless to Pets Poultry Humans** when used as instructed

Red Squill causes vomiting. Rodents cannot vomit and therefore die.
Ratoids (Red Squill) Biscuits 1/9, 4/9, 40/- Ratoids (Red Squill) Mousecrumbs 1/2, 2/

From Chemists (Boots branches) Corn and Seed Merchants, Ironmongers, Stores
PARISEK LTD. 17 VICTORIA STREET, LONDON, S.W.

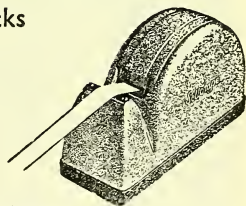




Sellotape Packs...

Tried Sellotape for your 'over the counter packages' yet? You should. It's the quickest, cleanest and easiest packing medium in the world . . . sticks at a touch, without gum or water. Protect bottle labels with Sellotape, too, no more torn edges, smears or dirt.

Sellotape is also available in handy dispensers for re-sale to the public. Backed by National Advertising and striking display material, they **really** sell! So make sure your stocks are adequate. Write or phone for full details, now!



SELLOTAPE

SELF-ADHESIVE CELLULOSE TAPE

GORDON & GOTCH LTD., 4 GORDON HOUSE, FARRINGDON STREET, LONDON, E.C.4

Telephone: CENTral 5211

"Winter Photography"

means ALL YEAR ROUND

Sales

NEW D20 CORONET BOX CAMERA

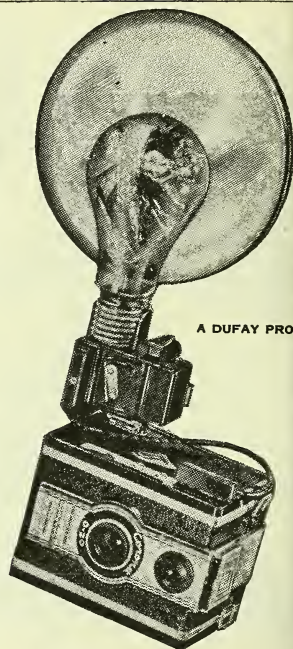
now available for the home
market in limited quantities.

BOX CAMERA **43/4** Tax paid
Retails at only

FLASH UNIT **36/10** Tax paid

DUFAY-CHROMEX LTD., 14/16 COCKSPUR ST., LONDON, S.W.1

TEL. WHITEHALL 67



A DUFAY PRODUCT

Femex

REGD.

Drastic cuts in 'FEMEX'

Sanitary Towels

Femex No. 1.....18/-.....2/-
Femex No. 2.....22/6.....2/6
Femex No. 3.....27/-.....3/-
Maternity.....27/-.....3/-
Soluble No. 1.....15/9.....1/9

High Quality unchanged
IMMEDIATE DELIVERY

WILFRED STRETCH & CO.
LIMITED
CASTLETON • ROCHDALE

Take it from me
these products
PULL THEIR WEIGHT

Satino

TOILET TISSUE

Satino Toilet
Paper in rolls
and Inter-
leaved Super
soft in boxes
—Backed by
Nation wide
publicity.



KWICK-DR

HOUSEHOLD TOWELS

A Boon to
every house-
wife. Supple
(Perforated) i
rolls.
Further detail
from address
below.

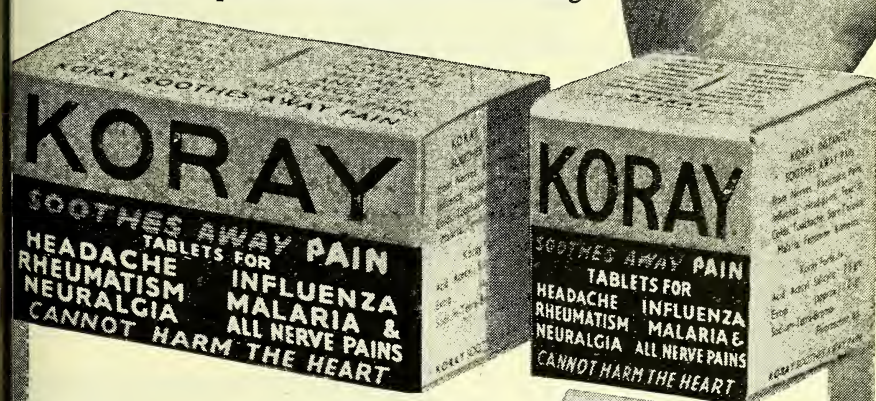
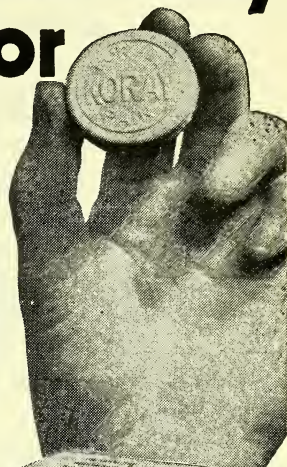
Details and Samples
can be obtained from the

manufacturers:

FREEDER BROTHERS PAPER MILLS
Brimsdown • Enfield • Middlesex
Telephone: HOWARD 1847 (5 lines)
Telegrams: Sylkocrepe, Enfield, Middlesex

HIS HANDY PLASTIC CONTAINER IS Increasing the already great demand for **KORAY**

Those thousands who regard KORAY as their "First Aid" in case of pain are making this plastic container their constant companion. It holds 5 tablets and fits into a waistcoat pocket or the smallest handbag.



There is a container in every one of the neat, "Cellophane"-wrapped packs of KORAY 28's and 64's. These larger sized packs of KORAY tablets give you a good profit margin and are excellent counter-lines. They are backed by powerful national advertising and create that goodwill which is only associated with a tried and proved product of quality.

The 10 tablet pack, recently re-designed, will act as an introduction to those who are not yet fully aware of the thoroughly dependable analgesic qualities of KORAY.



Send your order now to:

KORAY LTD., GOLDEN MILE WORKS, BRIDGEND, GLAM.

MORE AND MORE CHEMISTS ARE SAYING:
**"This two-way sales appeal
 brings bigger turnover"**

The Gold Cup
JAFFAJUCE
De Luxe **COCKTAIL SHAKER** **PACK**
 RETAILING AT 5/-

ORANGE

ORANGE & PINEAPPLE
 LEMON · GRAPEFRUIT
 BREAKFAST JAFFAJUCE
 GOLD CUP LIME

CLEAR, SPARKLING
BRILLIANT GLASSCOMBINED CAP & MEASURE
IN POLISHED ALUMINIUMATTRACTIVE, COLOURFUL
INDIVIDUAL CARTONSCOCKTAIL RECIPE
LEAFLET ENCLOSED

Order through your usual
 wholesaler. In case of difficulty,
 write to:—**JAFFAJUCE LTD.**, 87 Regent Street, W.I



THE SAME HIGH
 QUALITY CON-
 TENTS AS IN
 THE POPULAR
JAFFAJUCE
 BOTTLE
 Retailing at
3/6

every customer
 for lipstick . . .

IS A CUSTOMER
 FOR LIP-COTE



Supplement
 your lipstick sales with
 the front-making line that
 women everywhere have waited for!
LIP-COTE—the only preparation of its
 kind—applied over lipstick, definitely
 safeguards against smear, while en-
 hancing lip beauty. Widespread national
 advertising now being launched. Send
 for details, including attractive trade
 terms to:—

British Glandular Products Ltd
 37 Chesham Place, London, S.W.1

LIP-COTE
 for SMEARPROOF LIPS

FENOLIN P.A.T.A. **FLUID**

for WHOOPING COUGH
 for use with ELDON VAPORISERS

HALL FORSTER & CO. LTD.
 NEWCASTLE UPON TYNE

RECOMMEND

S.D.2

with confidence

**PENETRATES and REBUILDS DAM-
 AGED TISSUE in SKIN ILLNESSES**

Remarkable for the Treatment of Burns,
 Spots, Rashes, etc.

BIO-COLLOIDS LTD., Altrincham, Cheshire
 BC35



ARE YOU READY...

... to take advantage of today's great opportunity? You can make the SevenSeaS advertising work for you—you can use the Welfare Food publicity to build up a new adult market for Cod Liver Oil.

A striking window display will provide the link which turns this growing interest into sales. Make good use of it.

Write today for the two SevenSeaS showcards and for the special display material which will add colour and distinction to your window.

SEVENSEA'S

PURE COD LIVER OIL

British Cod Liver Oils (Hull and Grimsby) Limited, St. Andrew's Dock, Hull



Roter Gastric Ulcer Tablets

indicated for:

GASTRIC AND DUODENAL ULCERS

Retail prices: trial size (40) 7/11, standard size
(120) 22/6, full treatment size (640) £5. 12. 6.

Obtainable from the Importers:

F.A.I.R. Laboratories Limited
183 Heath Road, Twickenham

**For over 60 years
the trade have
relied on the**

**PILLS
CAPSULES
& TABLETS**

OF

HOWARD LLOYD

Many young chemists (as their fathers did 30 years ago) are placing all their orders with HOWARD LLOYD. They know that Howard Lloyd give constant satisfaction—in special order or regular bulk supplies.

HOWARD LLOYD & CO., LTD.
LEICESTER

FOR SALE

BOTTLES & JARS

Also Bakelite and Metal Screw Cap
SUBSTANTIALLY REDUCED PRICES

Large stocks of various kinds available for immediate delivery. Just send us details of your requirements stating quantities you want of each item and we will gladly quote by return.

RELIANCE TRADING CO

**13 NEW COLLEGE PARADE,
FINCHLEY ROAD, LONDON, N.W.2**

Telephone: PRIMrose, 5611 and 3167
Telegrams: 'GORDON' PRIMROSE 5611

Hiltone's advertising



This year the famous slogan "As light as you like . . . and no lighter" will be seen by millions of women — press advertising will be bigger than ever. Country-wide demonstrations will show how Hiltone brings glamour to the hair by brightening and lightening it — yet leaves it so natural-looking. This means bigger sales for you. So stock Hiltone, display it — you'll sell it.

**..steps out
to step up sales**



HILTONE

AS LIGHT AS YOU LIKE . . . AND NO LIGHTER

COUNTY PERFUMERY CO. LTD., STANMORE, MIDDLESEX

OUR VANS DELIVER IN YOUR AREA EVERY DAY



THE COMPLETE CHEMISTS' WHOLESALER

SIDNICK

11-12 Finsbury Square, London, E. 2. Tel: MON 06
South Coast Branch:
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PATTINSON'S MAGNESIA

GUARANTEED B.P. QUALITY

Mag. Carb. Levis.	Mag. Carb. Pond.
Mag. Oxide Levis.	Mag. Oxide Pond.
Mag. Trisilicate.	
Mag. Hydrate.	Mist. Mag. Hydrox.

Supplied through all wholesalers
by the sole manufacturers:

The **WASHINGTON CHEMICAL**
CO. LTD.

A MEMBER OF THE
TURNER & NEWALL ORGANISATION

WASHINGTON
CO. DURHAM

London Office:

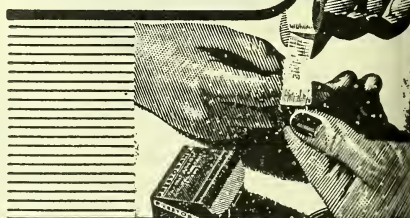
Everite House, 59½, Southwark St., S.E.1

Manchester Office:

15, Pollard St. East, Manchester, 10

NOT STICKY

... it's NOT a plaster



BUT IT STICKS!

..it's MORE than a bandage

PRESTOBAND

THE ANTISEPTIC SELF-ADHESIVE BANDAGE
STICKS TO ITSELF — BUT NOT TO THE SKIN

Details from the Sole Distributors

FASSETT & JOHNSON LTD

86 Clerkenwell Rd., London, E.C.1 and 6 Crow St., Dublin
MADE BY VERNON & CO., PRESTON, LANC

Always buy **I.C.C. £10 PARCELS**



They cost you only
£8.15.0

You sell for **£13.6.8**

Your profit each time is
£4.11.8

These are the I.C.C. Products

Anne French ' Cleansing Milk
Anadin ' Tablets
BiSoDoL ' Powder
BiSoDoL ' Tablets
Bisurated Magnesia ' Powder
Bisurated Magnesia ' Tablets
Freezone ' Corn Remover
Kolynos ' Dental Cream
Kolynos ' Denture Powder
Kolynos ' Denture Fixative
Kolynos ' Shaving Cream
Lystone ' Salts
Pineate ' Honey Cough-Syrup
Reudel ' Bath Salts

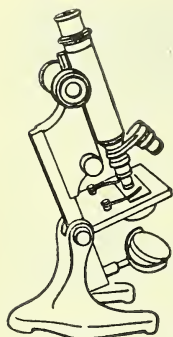
Any **I.C.C. Product** can be included in an I.C.C. mixed parcel qualifying for the extra Co-operation Discount of $12\frac{1}{2}\%$ on parcels to the value of £10 and over, 10% on parcels to the value of £5 and over . . . on top of the usual basic trade discounts.

The great variety of I.C.C. products — all of them household words — means that every pharmacist can give a mixed order large enough to qualify for Co-operation Discount . . . without risk of over-stocking.

Study the List of I.C.C. products carefully — work out the best combination for you — and use this opportunity for *extra profits*.



INTERNATIONAL CHEMICAL CO. LTD., Chenies Street, London, W.C.1



**CONSTANT
RESEARCH**

Research, Standardisation, Activity, Purity — these important factors have built up the high reputation of "Oxoid" Medical Preparations.

**EXPRESS
DELIVERY**

Your orders, by letter, telephone or telegram are dealt with immediately and goods reach you in the shortest possible time.

Among the many "Oxoid" Medical Preparations are: Liver Extract, Hormones, Vitamins, etc.

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*Recommend to
your customers*

Ralgex
BRAND

ANALGESIC — RESOLVENT
COUNTER-IRRITANT

**SOLID
EMBROCATION**

for
RHEUMATIC and MUSCULAR PAINS
NEURALGIA and HEADACHES
BRONCHITIS, CATARRH and LARYNGITIS

Handy, clean, practical and efficacious. Prescribed by doctors and regularly advertised in medical and nursing journals.

Packed in artistic counter-display outers containing 1 doz. — a great aid to individual sales.

Write for trade terms, samples & literature.

PHARMAX LIMITED

The Organ Works, Old Hill, Chislehurst, Kent.

PHARMA
product



LANETTE

(Registered Trade Mark since 1930)
of Deutsche Hydrierwerke A.G.)

WAX SX

MANUFACTURED IN ENGLAND

The original product was always imported from Deutsche Hydrierwerke prior to the war

Special Reduced Quotations

Ask for booklet, samples, etc.

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UNITED KINGDOM REPRESENTATIVES
OF DEUTSCHE HYDRIERWERKE A.G.

DUESSELDORF

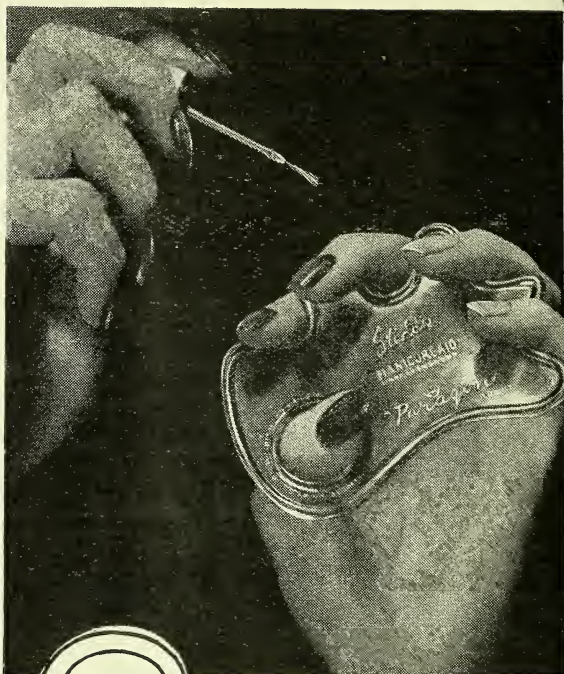


There's more Ribena now!

THE position with regard to supplies of Ribena is easier. With the new

Carter Royal Forest Factory gaining momentum, and last year's blackcurrant crop a bumper one, there should now be enough Ribena *for most people who need it*. You should now be able to meet all priority needs. If in difficulty write to C. Massingham, Supplies Director.

Ribena
BLACKCURRANT SYRUP
(particularly rich in natural vitamin C)



Millions of
American Women
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THE MANICURE AID

Now for the first time you
can stock this new aid for
feminine finger beauty—
Steddie steadies the hand
and allows Nail Polish to be
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RETAIL
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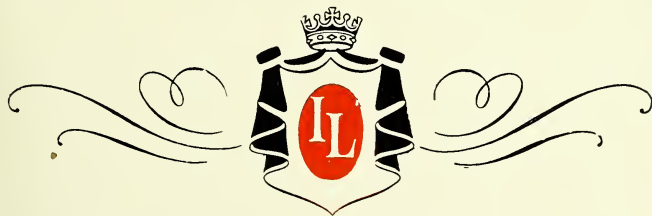


IMPERIAL LEATHER

HAND-FINISHED

Toilet Soaps

The Imperial Leather Toilet Soap made by Cussons has a consistent record of success. The steadily expanding market for this product indicates a widespread appreciation of really fine hand-finished Toilet Soap.



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The
CHEMIST AND DRUGGIST

FEBRUARY 4, 1950

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COX

of Brighton

AN ORGANISATION ABREAST
OF THE LATEST MECHANICAL
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Manufactures include

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PHARMACEUTICALS : SOLVELLÆ
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